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# JOURNAL

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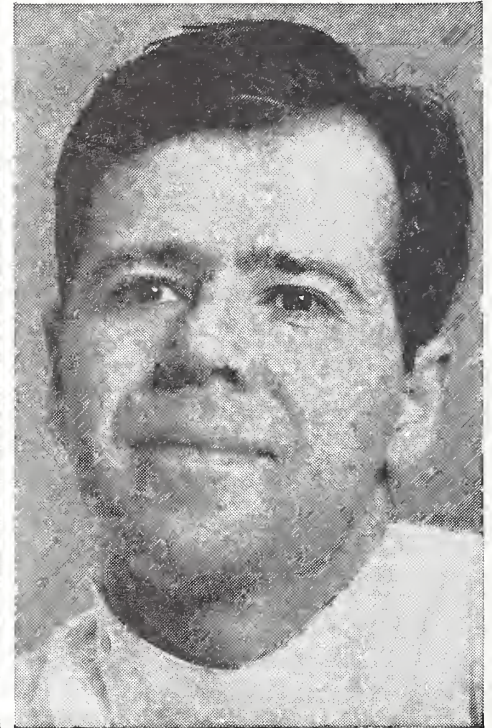
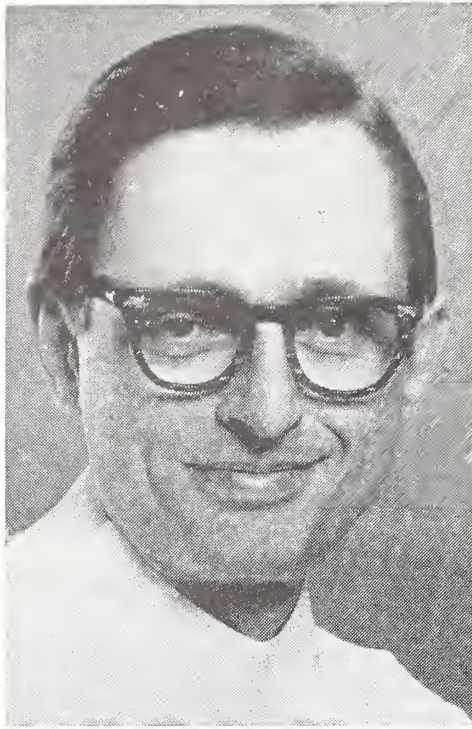
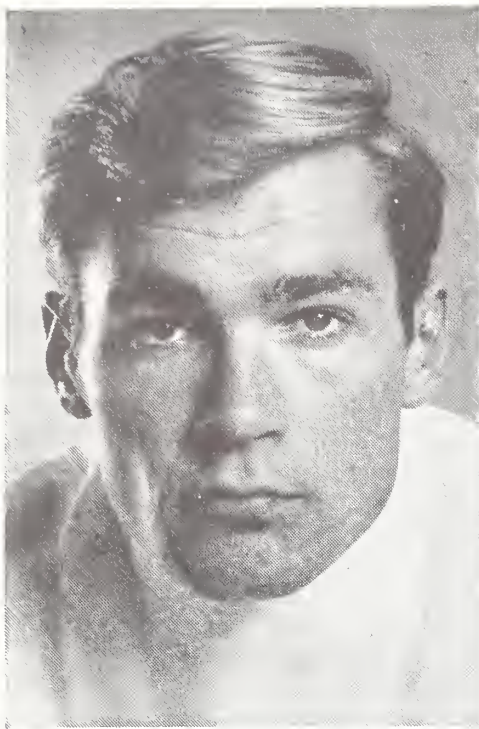
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## TABLETS

# Equagesic<sup>®</sup>

(meprobamate and ethoheptazine  
citrate with aspirin)



## IN BRIEF.

**Contraindications:** History of sensitivity or severe intolerance to aspirin, meprobamate or ethoheptazine citrate.

**Warnings:** **USE IN PREGNANCY:** Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

**Precautions:** Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics—has resulted in dependence or habituation. Withdraw gradually after prolonged excessive dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance, with resultant slowed reactions and impaired judgment and coordination. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, patients should not operate machinery or drive. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously and in small amounts to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with gastric lavage and appropriate symptomatic therapy (CNS stimulants and pressor amines as indicated). Two instances of accidental or intentional significant overdosage with ethoheptazine and aspirin have been reported. These were accompanied by CNS depression (drowsiness and lightheadedness) but resulted in uneventful recovery. On basis of pharmacologic data, CNS stimulation could be anticipated, with nausea, vomiting and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]).

**Adverse Reactions:** Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress, in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

**Overdosage:** See precautions section for management of overdosage.

**Composition:** 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa.

Photo professionally posed.





## *The Competition*

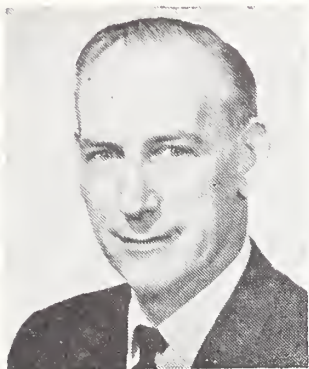
DURING THE past few months we editors have been studying the varied problems associated with the preparation and publication of *The Journal*. We know that many of these problems are perennial and universal. We believe, however, that our major problems are broader in scope and more profound than their counterparts of yesterday. Paramount in this array of problems is the one of competition. Certainly competition is nothing new, but the sheer mass of today's competition has achieved thoroughly novel proportions. The number of medical journals arriving in our reader's mail has surely tripled or quadrupled in the past 25 years. The objective of this suddenly rising competition is the reader's attention and interest.

As your editors, it is our responsibility to succeed in this competition for your interest. Our first and greatest challenge is to maintain *The Journal* as the most appealing and attractive publication in your mail. In order to do this we must accurately analyze your objectives as you peruse *The Journal*. Our success depends upon our ability to satisfy those objectives with scientific articles which relate to your profession-

al activities and needs; with information about current events in your professional community; with news of the activities of your colleagues and organizations. Whatever your objectives might be we want to satisfy as many of them as possible. We want every issue of *The Journal* to have some meaning for you as a physician.

Our plans are ambitious. We hope to devise a system of publication which will attract original publications from authors of national and international repute. We hope to establish a broader communication with medical students through publication of articles and editorials written by them. We hope to increase reader-participation in the publication of *The Journal* by establishing rotating terms for contributing editors. We plan to stimulate and publish letters, comments and opinions from all of our readers. We plan to develop a forum for controversy which will invite expressions from civic, political and professional leaders outside as well as inside the field of medicine.

In order to succeed in carrying out these plans we must have your support; we invite your suggestions, your comments, your ideas. We solicit your criticism and are anxious to hear your complaints. With your help we will not only meet the competition; we will create it.—M.R.J. □



On January 1st the outgoing Secretary of HEW, Wilbur Cohen, issued a press release in which he "warned" physicians to "stop raising fees or Congress will step in." He suggested that legislation would be forthcoming to set a fee

schedule.

Close behind this public statement came Mr. Cohen's telegram to each state medical association president which advised that he was leaving the premium for Part B of Medicare (physicians' services) unchanged for the next fiscal year even though his actuaries predicted a substantial rise in fees. He urged physician-restraint in both fee increases and utilization.

A significant aspect of this telegram lies in the prospect of saddling the incoming Administration with an inadequately funded program.

Because of the anticipated deficit in Part B, Congress may be expected to reduce its support for other general revenue commitments, notably Part A of Medicare and the Medicaid program.

Increased hospital per diem costs to the private sector are the natural result of inadequately financed government programs. If events continue in the direction currently in vogue, the clamor from previously self-reliant citizens for Federal support or subsidy may be loud indeed!

It becomes obvious that socialization of health care is being expertly engineered and that forces have been set in motion to hamstring the incoming Administration. Moreover, there is no convincing evidence to date that the new Administration is strongly motivated to the contrary.

The deterrent to socialism lies in the preservation of that segment of our citizenry which presently wants to remain financially independent. Toward this objective we must direct ourselves!

Sincerely yours,

*Scott Henderson, M.D.*



## Calculous Biliary Tract Disease

FRANK GLENN, M.D.

*The prevalence of calculous biliary tract disease and the disability it imposes upon those whom it involves justifies bold investigation to seek out preventative measures.*

IT IS FOR ME a privilege to have the opportunity to discuss before this assembly such an important health problem as biliary tract disease. It is a problem of magnitude that has many facets and ramifications. It relates to our entire population that now approaches 200 million. An estimate that 15 per cent of the population will have biliary calculi during their lifetime is probably conservative. Such calculi account for operations upon the biliary tract being amongst those most frequently performed in our general hospitals. The disability biliary tract disease accounts for can only be surmised but unquestionably it is considerable.<sup>1</sup> Statistical data from public health agencies, hospitals and clinic reports in current medical literature strongly suggests, if not establishes, that the incidence is increasing. For example, the Metropolitan Life Insurance Company<sup>2</sup> in June of 1968 stated that 21 million of our population will be 65 years and older by 1975. In the elderly the high incidence of complications of calculous biliary tract disease requiring surgery is well recognized. The ensuing mortality rate is greater than in the younger and more robust. Specific preventive measures as yet are lacking. Under these circumstances we physicians are confronted with the respon-

sibility of its early recognition, diagnosis and recommendation of the most effectual management and treatment.

*Diagnosis:* Little needs to be said about the clinical manifestations of calculous biliary tract disease—they are well known. Confirmation by cholecystography has to its credit one of the highest ratings of accuracy by direct and indirect tangible findings. In a recent 12-month study at The New York Hospital-Cornell Medical Center (1966) of 693 cases demonstrated to have cholelithiasis, the diagnosis was established by oral cholecystography in 80 per cent of the patients. The ease of diagnosis of cholelithiasis sometimes misleads us. A gallbladder demonstrated to contain calculi by cholecystography does not exclude the existence of other conditions that may be the cause of the patient's symptoms. Thoroughness in evaluation of the patient readily brings these into perspective. Patients should be informed of our findings. Peptic ulcer, diaphragmatic hernia, diverticulitis and renal disease are examples of the more commonly encountered conditions that unrecognized or inadequately evaluated prior to surgical treatment of gallstones account for persistent or recurrent symptoms erroneously attributed to "the post-cholecystectomy syndrome."<sup>3</sup>

*Medical Management in the Absence of Contraindications to Surgery Permits and Encourages Progress of the Disease Toward Complications and an Irreparable Damage:* The establishment of the diagnosis of biliary calculi as a cause of symptoms is, in my opinion, an indication for operation. To advise regimes of medications and diet regulation seldom, if ever, eliminates the calculi from the gallbladder that have been directly visualized or are presumed present in the gallbladder that is not visualized by recognized radiologic methods. If contraindica-

Presented at the Oklahoma City Clinical Society, October 28th-30th, 1968 in Oklahoma City.



tions to surgery are present their correction is in order. Thereafter the risk they superimpose on any operative burden merits comparison with those complications of untreated biliary calculous disease. The longer calculous biliary tract disease is present the greater is the likelihood of such sequelae as acute cholecystitis, common duct calculi, gallstone ileus<sup>1</sup> and carcinoma.

*Surgical Treatment Interrupts the Disease, Relieves Symptoms and Provides Our Most Effectual Means of Cure:* Over a hundred years have elapsed since surgery in the treatment of biliary tract disease was introduced by Bobbs<sup>5</sup> in 1860 in Indianapolis. Cholecystostomy, cholecystectomy, choledochotomy have evolved as the most frequently performed operations. The criteria for selecting the particular procedure at the operating table with consideration of the overall circumstances have become well established. They are based on safety, thoroughness to attain the objective, and keeping the burden of the operative procedure within the capacity of the patient. The factors that are involved are numerous including an appreciation on the part of the surgeon of his

capabilities and limitations. Surgical technique that avoids injury to such vital structures as the common duct and blood supply to the liver is mandatory to successful surgical therapy.

*The Morbidity of Complications and Mortality Associated with Biliary Tract Surgery is Being Reduced:*<sup>6</sup> In a recent analysis of over 3,200 biliary tract operations performed during a 16-year period at The New York Hospital-Cornell Medical Center, infection was found to be the leading cause of morbidity. Although principally it was localized in the wound, there were also instances in which it occurred in the drain site and in the subphrenic spaces, *i.e.* subhepatic accumulations containing lymph, bile and blood. Organisms normally present in bile are usually non-pathogenic but provided with a media of blood and lymph can grow rapidly to be the cause of a devastating abscess or extending process to the subdiaphragmatic area or elsewhere in the peritoneal cavity. At operation preservation of the integrity of the liver capsule of the gallbladder, meticulous hemostasis and drainage of the subhepatic area to the exterior with a Penrose drain and catheter reduces the incidence of this complication. Massive hemorrhage<sup>7</sup> from the cystic artery,

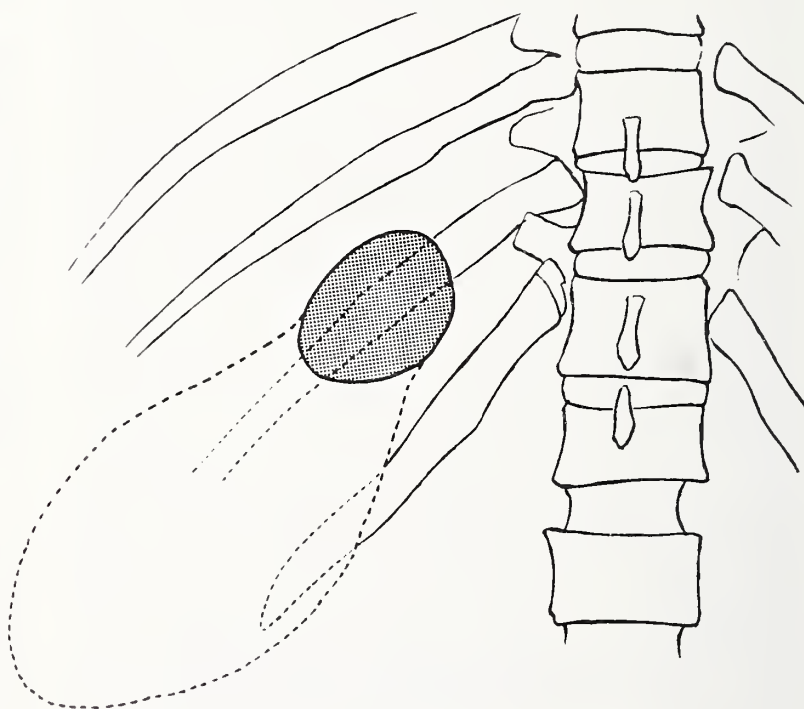


Figure 1. Sex: F Age: 69

*Acute cholecystitis:* A patient who had had symptoms compatible with biliary colic in "middle" life suddenly developed RUQ pain with tenderness that persisted. A flat plate of the abdomen revealed a large calcium speckled gallstone. At operation there was an obstructive acute cholecystitis with gangrene of the fundus. A cholecystomy was done with recovery.



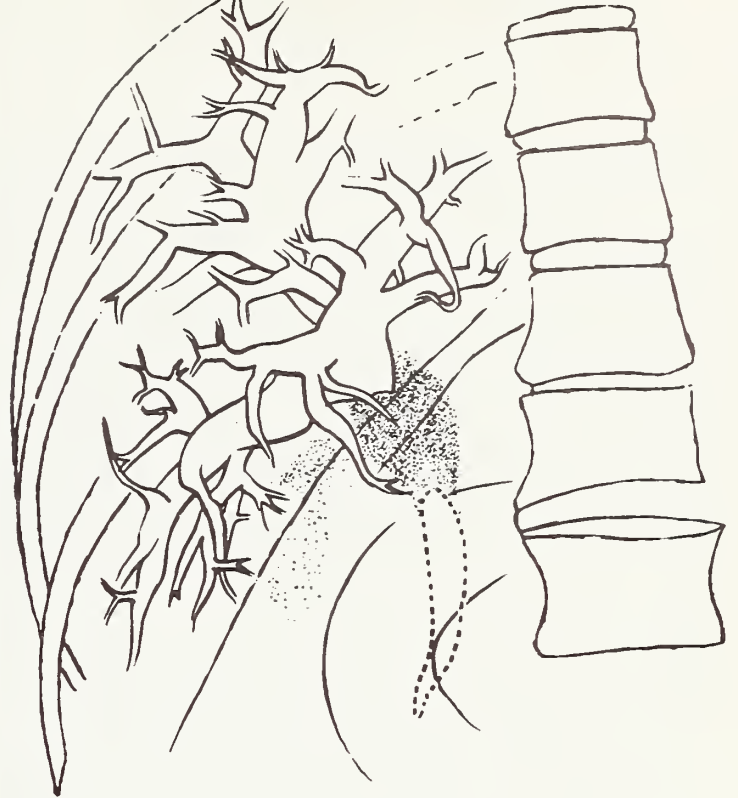


Figure 2. Sex: F Age 52

*Carcinoma of gallbladder extending directly into common hepatic duct, one year following cholecystectomy:* A gallbladder containing calculi was found to be the site of a "small carcinoma." The patient was observed for ten months to be symptom-free. She then became jaundiced. Complete obstruction is demonstrated by transhepatic cholangiogram. Palliation with complete subsidence of jaundice was obtained by insertion of a tube from dilated intrahepatic ductal system through the tumor mass into the distal common duct.

leakage from a cystic duct or choledochotomy closure are reported in many published series. Uncontrolled complications are a cause of mortality directly related to the surgical procedure. There are other causes less directly related to the biliary tract but attributable to the operative procedure. These include coronary occlusion, pulmonary emboli, atelectasis, ileus and renal failure. Preoperative evaluation does much to alert one to their occurrence. This is most important amongst the elderly and debilitated. The improvement in anesthesia, an understanding of water and electrolyte requirements, facilities to maintain efficient respiratory exchange including early mobilization and good nursing care are

contributing to reducing morbidity of complications and mortality that render surgical therapy safer and more acceptable to the patient.

There are numerous examples that might be cited to illustrate some of the major problems encountered by the surgeon which emphasize that early operation in calculous biliary tract disease is desirable.

1. Acute cholecystitis in the elderly.
2. Carcinoma of the gallbladder.
3. Biliary enteric fistula and associated gallstone ileus.
4. Acute suppurative cholangitis.
5. Sclerosing cholangitis.
6. Intrahepatic calculi.
7. Cholelithiasis and choledocholithiasis associated with Cushing's syndrome.

Major biliary problems are seen in all ages including the robust and very young.

1. Automobile accidents causing major trauma to liver and biliary tract.
2. Co-existent but unrelated pancreatitis.
3. Congenital anomalies of the bile ducts.
4. Aplasia of the ductal system.

There are several questions that are often asked in any discussion dealing with management of calculous biliary tract disease. These are associated with specific situations. Five such clinical entities when encountered

---

Since his graduation from Washington University School of Medicine in 1927, Frank Glenn, M.D., has been certified by the American Board of Surgery. He is presently Lewis Atterbury Stimson Professor of Surgery Emeritus at Cornell University Medical College. Doctor Glenn is a member of the American Association for Thoracic Surgery, the American College of Surgeons, the American Geriatrics Society, the International Society of Surgery and the Southern Surgical Association.



evoke different approaches and I present with them my preference.

1. *Silent Gallstone*:<sup>8</sup> Completely asymptomatic calculi are rare but calculi producing minimal "symptoms" that are so well tolerated that no specific complaints indite the biliary tract are repeatedly encountered in practice. They are usually brought to light by roentgenograms in the course of an overall examination and evaluation. In the absence of contraindications to operation, cholecystectomy is recommended because:

- (a) Calculi, though silent may cause obstructive acute cholecystitis;
- (b) The longer calculi are present in the gallbladder, the greater is the incidence of choledocholithiasis;
- (c) Gallstones are associated with varying degrees of cholangitis that may impair liver function over periods of time;
- (d) Carcinoma of the gallbladder seldom occurs in the absence of cholelithiasis;
- (e) Well over 50 per cent of patients who have been followed for ten years following demonstration of "silent gallstones" develop conditions that require surgery.

2. *Acute Cholecystitis*: Acute cholecystitis frequently precipitates controversy as to its management. One contention is that it is a phase that may be expected to subside and that on an elective basis operation is easier and safer for the patient. The opposing view is that the course of the patient with acute cholecystitis, particularly an individual in the older age group, is unpredictable and that perforation can and does occur.<sup>9</sup> An ever-increasing clinical experience has demonstrated that selective surgery is accomplished with relative ease and safety amongst comparable age groups. This relieves symptoms, reduces complications and interrupts the ordinary progress of the disease. An experience with over 1,200 patients treated by such surgical procedures at The New York Hospital-Cornell Medical Center attests to this policy, which I have long supported.

3. *Cholelithiasis and Coronary Artery Disease*:<sup>10</sup> Patients with coronary artery disease on complete evaluation are sometimes

found to have cholelithiasis. The innervation of the gallbladder and biliary tract and that of the heart and pericardium are well documented. It is also known that pain arising in the biliary tract may precipitate an anginal type of attack and vice versa, pain stimuli arising in the heart may be interpreted as arising in the right upper quadrant. The commonly offered explanation of this is that the close relation of the afferent pathways accounts for similar sensations perceived by the patient. Cholecystectomy has reduced the incidence of anginal attacks in some patients with known coronary artery disease, and it has failed to change them in others. The nature of the coronary disease and its severity as evaluated by a cardiologist should indicate to the surgeon what risk the operation would impose on the patient. I favor operation when I believe it can be accomplished with reasonable safety.

4. *Carcinoma of the Gallbladder*:<sup>11</sup> Carcinoma of the gallbladder is encountered in about one per cent of patients who are operated upon for biliary tract disease. I have recently learned that in Alaska there is a higher incidence of carcinoma of the gallbladder. Only occasionally is it suspected prior to operation. The prognosis is currently grave with an average period of survival following proven diagnosis of slightly over two years. The majority of patients are over 60 years of age and over 90 per cent have gallstones. These two bits of information are the basis for removing the gallbladder that contains calculi before this age is attained. The brevity of life survival, in my opinion, justifies a more aggressive and radical surgical approach than simple cholecystectomy. When it is encountered, a trial use of chemotherapy should be embarked upon, with or without the demonstration of evident extension.

5. *Jaundice*:<sup>12</sup> Although there is an awareness that jaundice may be caused by a number of conditions, biliary tract disease is probably brought forth for discussion more frequently than any other. The establishment of an acute diagnosis is readily arrived at in an estimated 85 per cent of instances. The remainder are difficult clinical problems to almost any physician regardless of his field of interest. The longer a patient in this category has been jaundiced,



usually the more difficult is the differential diagnosis. Surgeons are not infrequently brought into consultation by their fellow physicians who favor surgical intervention as a way to confirm the diagnosis and/or provide definitive therapy. It is to be emphasized that re-evaluation with confirmation of all possible information should always precede any operative procedure in the "problem" patient who is jaundiced. The increasing incidence of viral hepatitis in the general population renders the hazard of surgery greater than a decade or so ago since the burden of an operation and anesthesia may result in death.

In any consideration of the clinical management of calculous biliary tract disease there naturally arises the question of etiology and positive prevention. There have been over the years many plausible theories and explanations.<sup>13</sup> Several factors are generally agreed to be involved. At The New York Hospital-Cornell Medical Center we have for long been aware of the high incidence of biliary calculi in women who have been pregnant. This experience is not universal however. In 1944, Robertson<sup>14</sup> and Dochat from the Mayo Clinic stated that they believe there is little if any difference. They point out that the proportion of the female population that becomes pregnant is high, and that it follows that most women with gallstones will have been pregnant. However, Horn<sup>15</sup> found the incidence in Birmingham, England, to be quite in keeping with our observations. This view also is supported by Dessau<sup>16</sup> and by Potter.<sup>17</sup> Likewise, Deaver<sup>18</sup> and Ashhurst in 1913 stated that cholelithiasis occur "much more frequently in those women who have been pregnant, and especially in those who have borne many children, than in those whose uterus has never been gravid." They cite Schröder as finding "ninety-nine out of 115 women, who had died during the child-bearing period and who had had cholelithiasis, had been pregnant at some time during their lives." Mayo is quoted by them as saying "90 per cent of married women who have gallstones have borne children, and 90 per cent of these women identify the beginning symptoms with some particular pregnancy."

Shortly after the onset of pregnancy there are significant alterations in cholesterol and

steroid metabolism manifested by increased serum cholesterol and cortisol, increased urinary content of 17-OH and 17-keto-steroids, and sometimes an elevation of bile cholesterol. These changes have been documented by us in a group of women during a normal pregnancy. They are being compared with those observed in (a) female nulliparous patients with gallstones and (b) female patients pregnant in the past and (c) male patients with gallstones.

## CONCLUSION

The magnitude of the clinical problem of biliary tract disease alone renders it imperative that we pursue investigations to prevent the formation of biliary calculi. Many factors have been implicated. Sporadic and fragmentary studies of past decades are being re-evaluated in the light of increasing knowledge of the biochemistry of the normal physiology of the liver and biliary system and its distortions. Certainly these merit the expenditure of funds for personnel and facilities. That this shall be brought about in a manner commensurate with the importance of the problem is a responsibility of the medical profession. □

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The New York Hospital, Cornell Medical Center,  
525 East 68th Street, New York 10021

# Immunological Aspects of Tissue Transplants

FLOYD F. MILLER, M.D.

*Rarely has a medical innovation drawn as much praise and criticism as tissue transplants. Success of the transplants will depend upon control of immunologic mechanisms responsible for rejection of donor tissue.*

## SOURCES OF DONOR MATERIAL

**T**ISSUES MAY BE obtained from animals of the same or other species. If another species provides the tissue, the material is known as a heterograft. If the tissue is transplanted from one individual to another of the same species, it is a homograft. Tissues exchanged between individuals of identical genetic constitution, such as monozygotic twins, are known as isografts. An autograft occurs if the donor is also the recipient.

The majority of human transplants have involved isografts and homografts. Chimpanzees, baboons, apes, and Rhesus monkeys have less frequently provided donor tissue. Reasons for success of autografts and isografts in contrast to the frequent failure of homografts and the usual failure of heterografts will be presented later.

## NATURE OF TISSUE ANTIGENS

The cellular antigens responsible for provoking homograft reactions are called transplantation antigens and are present in all living cells.<sup>1, 2</sup> The determinants of transplantation antigens, designated histocompatibility genes, have chromosomal locations known as histocompatibility loci. Acceptance of the graft will occur if each of the donor's histocompatibility genes is represented in the host so that the host is not confronted with foreign transplantation antigens. Therefore, grafts with identical histocompatibility genes, as with isografts, will be successful. Those with alien transplantation genes will induce an immunologic response.

The histocompatibility loci are of varying antigenic potency.<sup>3</sup> Strong transplantation antigens are known as major loci; the weak antigens are known as minor loci. A difference between donor and host with respect to a single major locus usually results in a maximal homograft rejection. A difference at a minor locus may result in slow and gradual rejection. Synergistic effects may occur when there are differences at several minor loci. The Y chromosome of the male which is lacking in the female is one example of a weak histocompatibility locus.<sup>4</sup>

There is no evidence of tissue specificity in transplantation immunity as all living cells seem to have the full complement of histocompatibility genes.<sup>5</sup> If a person be-



comes sensitized to one type of tissue from a particular donor, he will show sensitivity to all tissues from that donor. However, the cells of certain tissues may vary quantitatively in their content of transplantation antigens. Red blood cells may induce serologically detectable antibodies determined by histocompatibility genes, but there is varying evidence whether they can elicit sensitivity to tissue homografts.<sup>6</sup>

The chemical nature of the antigens responsible for inciting homograft sensitization is not yet known. There is evidence that the antigenic specificity determined by the H-2 locus of the mouse is associated with the lipoproteins present in the microsomal fractions of homogenized lymphoid cells.<sup>7</sup>

#### IMMUNOLOGIC RESPONSE TO TISSUE TRANSPLANTS

There is an impressive body of evidence to suggest that homograft sensitivity is related to delayed (or cellular) hypersensitivity,<sup>8</sup> so a brief discussion of delayed hypersensitivity is appropriate at this time. This type of immunity cannot be transferred from a sensitive to a normal subject by means of serum, but it can be passed by cells obtained from lymphoid tissue, peritoneal exudates, or peripheral blood.<sup>9</sup> Lymphoid cells taken from sensitive subjects are adversely affected by exposure to the corresponding antigens *in vitro*.<sup>10</sup> In certain clinical states, there is a dichotomy in the ability to synthesize circulating antibodies and to develop delayed sensitivity. In sex-linked hypogammaglobulinemia, little or no circulating antibody is detected although delayed sensitivity can be induced.<sup>11</sup> In Hodgkin's disease<sup>12</sup> and in sarcoidosis, the reverse may be true. The active cell in delayed sensitivity is almost surely the small lymphocyte.<sup>10</sup> Thymectomy in the neonate mammal appears to depress subsequent antibody synthesis and delayed sensitivity, although in fowl only the latter is affected.<sup>13</sup> Removal of the thymus after the neonatal period has little or no effect on either system in the human. Clinical examples of delayed sensitivity include the tuberculin reaction and dermatitis venenata ("poison ivy").

All forms of homograft sensitivity leading to destruction of solid tissues or organs are associated with an infiltration of the

foreign tissue by mononuclear cells of the lymphocytic series. In the primary response, the lymphocytes are usually first noted at approximately the sixth day, with progressive infiltration until rejection is complete in approximately 14 days.<sup>14</sup> How immunologically activated lymphocytes mediate their effect remains unknown. However, Waksman has concluded that two processes contribute: 1. local accumulation of mononuclear cells both inside and outside vessel walls, and 2. a direct cytopathic action of these cells on the foreign cell population of the graft.<sup>15</sup>

Lymphocytes from a sensitized recipient will transfer tissue immunity to another subject.<sup>16</sup> If this subject is then challenged intradermally with tissue from the original donor, a classical tuberculin-type delayed reaction will be obtained.

When a second homograft from the same donor is placed after the first has been rejected by the recipient, the rejection of the second-set homograft appears more quickly.<sup>14</sup>

An extremely interesting but unfortunate complication of tissue transplantation is the introduction of competent donor lymphocytes into the recipient which may then become sensitized against tissues of the recipient. This is known as a "graft-versus-host" reaction.<sup>17</sup> In smaller animals this results in a disease termed "runt disease" because of the wasting that is induced. This is frequently associated with diarrhea, dermatitis, and death. Clinical appearance of "graft-versus-host" reaction in humans may arise with transplantation of lympho-hemopoietic tissue after extensive irradiation to destroy malignant host marrow tissue.

Humoral isoantibodies are formed in response to transplantation antigens but are not thought to play a significant role in the destruction of tissue homografts.<sup>1</sup> Cellular suspensions of lymphoid and marrow material from the donor are susceptible to humoral antibodies of the sensitized host.<sup>18</sup> This requires the presence of complement and may be demonstrated *in vitro*. However, transplant immunity cannot be passively transferred by humoral antibodies, and these antibodies will not destroy an established graft in a tolerant host.<sup>1</sup> Circulating humoral antibodies appear to be "markers" of the process rather than being involved in the actual immunity.



FACTORS INFLUENCING THE  
IMMUNOLOGIC RESPONSE

There are many factors which influence the host response to the transplanted tissue. Many of these factors are of clinical significance at present; others are only of theoretical significance. A few of the factors have been briefly discussed earlier in this paper but will be placed in a more clinical setting now.

The factors may be artificially classified as specific and non-specific. The specific will include biological influences of the host and donor, and the non-specific will deal with radiation, corticosteroids, and antimetabolites. There will be no attempt to list the factors according to importance.

A. "Specific" factors

1. Special sites. There are special sites in the body in which a transplant may acquire a blood supply and yet be accepted by the host.<sup>19</sup> The brain apparently has no lymphatic vessels leading from a graft to a seat of immunologic response. The anterior chamber of the eye and substantia propria of the cornea also apparently do not have an afferent lymphatic pathway, and this allows for prolonged survival of the donor tissue. However, should donor tissue be applied to another site of the recipient with subsequent induction of immunity, grafts placed on the cornea or brain will be rejected. Apparently the efferent pathway from the site of immunologic response to the grafted area is intact and allows sensitized lymphocytes to invade the area.

2. Special tissues. Cartilage grafts are unique in that they will survive even in specifically sensitized hosts.<sup>20</sup> The lack of blood vessels and distinctive physiochemical properties of the ground substance are thought to contribute to the survival of the chondrocytes. The mammalian fetus is a large homograft which does not sensitize the mother. Fetal cells do contain transplantation antigens. Aside from the separation of the blood supply from the mother, the success of the fetus as a homograft depends on the peculiar properties of the fetal trophoblast cells that separate maternal from fetal tis-

sue.<sup>21</sup> These cells behave as if they lack transplantation antigens.

3. Route of administration of antigen. In lower animals, the intravenous administration of living cells is less effective for sensitization than other routes.<sup>22</sup> Also, this route of injection may weaken the animal's ability to react to subsequent homografts. This may be important in kidney transplants since antigens shed from the donated kidney reach the recipient by the intravenous route (renal vein).

4. Diseases of the host. In sex-linked agammaglobulinemia delayed immunity can be induced and tissue transplants are rejected. However, in the Swiss or lymphopenic type of agammaglobulinemia, there is a failure of homograft immunity.<sup>23</sup> Other diseases as Hodgkin's disease<sup>12</sup> or sarcoidosis also have diminished delayed immunity with resultant diminution of transplant rejection. Patients with uremia secondary to chronic renal disease tolerate skin grafts better than normal persons.<sup>24</sup> It is presumed that the uremic patient will accept a kidney transplant more favorably, also.

5. Thymectomy. In most mammals, thymectomy in neonates results in decreased delayed immunity (and homograft rejection) and antibody synthesis.<sup>13</sup> In the chicken, there is dissociation of immunologic function of the bursa of Fabricius and thymus. Skin homograft survival is prolonged in the absence of a thymus but is not significantly affected by the lack of bursa. Antibody production is little affected by thymectomy but is greatly affected by bursectomy.<sup>25</sup> It has been postulated that neonatal thymectomy results in the removal of a very active lymphoid tissue before its cells had been dispersed to the blood stream, spleen, and lymph nodes of the developing animal, resulting in underdeveloped lymphoid tissue and immunologic deficit. However, experimental

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evidence suggests that the thymus is an endocrine gland secreting a hormone which induces immunologic maturity.<sup>26</sup> After the neonatal period, removal of the thymus will have much less or no immunologic effect. It seems the only clinical application of thymectomy in homotransplantation would be in the newborn. This could occur in transplanting a heart to an infant with severe congenital cardiac deformity.

6. Immunologic Tolerance. As used here, immunologic tolerance implies a lack of response of the subject to specific antigens rather than general decreased response as with immunosuppressive agents. Injection of lymphohemopoietic cellular homografts into the embryo or newborn lower animals render the recipient incapable of rejecting future homografts from that particular donor.<sup>5</sup> Acquired tolerance is brought about naturally in dizygotic twins which establish vascular anastomosis in utero (usual in twin cattle but uncommon in twin humans). Such twins are chimeric with respect to the red cells and leukocytes and are tolerant of grafts of each other's tissues. The tolerance may be partial or complete. This immunologic tolerance is of theoretical clinical significance. Should the tissue of one or more persons be given to a newborn (or injected into the embryo in utero), there would be one or more donors possibly available to the recipient for future transplants should the need arise. If a group of donors could be used there would be a greater likelihood that there would be "compatible" donor tissue later if necessary. Although such organs as the heart and liver are available only at the death of the donor, other organs as a kidney or skin could be taken from the donor without doing great harm to him. The amount of lymphohemopoietic tissue given to the embryo or fetus would necessarily be small enough to not allow "runt disease," or a graft-versus-host reaction. However, this problem is compounded by the experimental evidence that a neonatal animal may become sensitized rather than tolerant if confronted with a very low dosage of homologous cells.<sup>27</sup> No investigation concerning this possibility as a clinical tool in the human is yet available. Induction of tolerance in adult animals requires their exposure to massive doses of antigen in living cellular

form. This may be achieved by a single large dosage<sup>28</sup> or possibly by chronic exposure to small doses of antigen.<sup>29</sup> Large organs such as the liver are considered more likely to be successful as transplants as a result of being a large inoculum of antigen, but other organs also may chronically shed cells which would somewhat allow for persistent exposure to antigen. Again, any tolerance induced may be only partial, and induction of tolerance in the adult animal is much more difficult.

7. Histocompatibility. As noted previously, an incompatible major locus will result in maximal homograft rejection, and the minor loci may react synergistically. Many attempts have been made to determine the histocompatibility of the donor and recipient before the transplant is accomplished. The following tests are frequently used at present:

(a) The "normal lymphocyte transfer" test involves the intradermal injection of lymphocytes from the recipient into multiple potential donors.<sup>30, 31</sup> This will result in delayed reactions of varying magnitude, and the larger the skin reaction the shorter the survival time of grafts from the cell recipient to the cell donor (proposed tissue recipient). This test reflects incompatible tissue antigens between the subjects, and is probably mediated through a graft-versus-host reaction.<sup>32</sup>

(b) The "third man" test is performed in two stages.<sup>33, 34</sup> First, a normal unrelated subject receives a single sensitizing skin graft from the intended recipient. A few days following its rejection, the subject is grafted simultaneously with a standard skin graft from each of the possible donors. The donor individual whose skin graft meets the most accelerated response is selected as being most similar to the recipient. The accelerated rejection of a second graft by the indifferent recipient depends on antigens that are shared by the donor of the original graft (the intended organ recipient) and the potential donor. This test avoids the obviously undesirable possibility of specifically sensitizing the intended recipient with a prior test of skin graft of donor origin.

(c) "Serologic typing" involves determining humoral antibodies to leukocytes and red blood cells. Determination of compati-



bility of lymphocytes by serotyping is becoming more widely used. A panel of antisera obtained from multiparous women and volunteers immunized with cells is employed for testing.<sup>35</sup> Mismatches are considered to exist when the donor lymphocytes react with a serum and the recipient lymphocytes fail to react. Matching with regard to any serum occurs whenever the donor lymphocytes do not react or if the recipient cells are killed by the serum. Therefore, an incompatibility exists when the donor's cells contain antigens not present in the host. It is now believed that there are relatively few serologically strong leukocyte antigens, and six antigenic groups have been delineated. These are of intermediate strength transplantation antigens and may not induce immunologic rejection with the use of current immunosuppressive therapy. In one study,<sup>35</sup> 21 of 36 kidney homografts survived more than two years in spite of incompatibility of one or two major leukocyte antigens. However, the group of 15 recipients with no mismatches were clinically superior to those with incompatibilities. In a study of renal function, patients with compatible donor-recipient lymphocyte antigens demonstrated statistically better function than those with one or more incompatibilities.<sup>36</sup> Skin grafts also survived longer when there was compatibility of leukocyte antigens.<sup>37</sup> Red blood cell compatibility is not a sufficient condition to allow homograft survival since homografts are destroyed despite a remarkable degree of red cell compatibility. However, skin grafts survived longer when there was compatibility of the ABO antigens.<sup>38</sup>

8. Anti-lymphocytic sera. Anti-lymphocytic sera may be obtained by the injection of lymph node cells from one animal into another. The injection is usually done on two occasions with an interval of 14 days, and the sera are obtained seven days after the second injection. Administration of the antiserum into a mouse which originally donated the lymph node cells results in a mild lymphocytic depletion and coating of the lymphocytes with the anti-lymphocytic sera.<sup>39</sup> In mice, this antiserum allows prolonged survival of homografts, with the survival persisting longer than the life of the

serum. Perhaps the most remarkable property of anti-lymphocytic serum in mice is its power to prevent the second set (or accelerated) response, a property that distinguishes it from all other immunosuppressive agents when used in innocuous dosage. The following hypotheses about the mode of action of the serum have been given:<sup>39</sup>

(a) Antiserum acts essentially as a lympholytic agent. This is doubtful as the degree of depletion of lymphocytes is comparatively modest and cannot be sustained. If this hypothesis were correct, the serum would require predilection for lymphocytes in a state of readiness to undertake an immune response.

(b) Heterologous antiserum acts as a competitive antigen. Heterologous antiserum might be thought of as an antigen which attaches itself to lymphoid cells, thereby preempting all members of the available reaction pool and leaving none to respond to other stimuli. The chief obstacle to this theory is the power of antiserum to nullify the action of cells which have already been sensitized as these cells would not attach to a new antigen.

(c) Action through the thymus. Preferential localization to the thymus of antiserum made from thymus cells gave rise to the idea that the serum may neutralize a humoral factor manufactured in the thymus. This is hard to reconcile with the promptness with which antisera act and the fact that it achieves so much more than adult thymectomy.

(d) Antisera act by preventing the recognition of antigen. According to this hypothesis, antiserum coats lymphocytes in such a way as to occlude their combining sites. Being thus "blindfolded," lymphocytes could not recognize antigen either to start an immune response or to put a pre-existing state of sensitivity into effect.

Most of the experimental work with anti-lymphocytic sera has been with animals. More recently, greater interest has arisen in relation to its use in human transplantation. Anti-human lymphocytic sera prepared from multiple human donors did not equally affect the white cells from all the individuals used for immunization.<sup>40</sup> These findings are presumably due to differing antigenic constitutions of the lymphocytes in the donors.



Therefore, the serum could be more effective in immunosuppression for some individuals than others. Either a very large pool of lymphocyte donors or the use of lymphocytes of the recipient would apparently be required for more effective immunosuppression. Antilymphocytic sera tested in vitro with human peripheral blood lymphocytes had cytotoxic and agglutinating properties.<sup>41</sup> It could also transform the lymphocyte to blast cells, and it has been suggested that immunosuppression in vivo may be mediated by "sterile activation" through lymphocyte transformation.

Antilymphocytic serum is a promising immunosuppressive agent, and it has been recently used in human kidney transplants.<sup>42</sup>

#### B. "Non-specific" factors

1. Irradiation with x-rays. Very large doses of x-ray irradiation act by destroying both unstimulated immunologically competent cells and "memory" cells and preventing their regeneration. Smaller doses destroy most of the immunologically competent cells, although these slowly regenerate. If lethal doses of irradiation are used, long-term acceptance of grafts occurs if the donor cells repopulate the host so that it survives. With sublethal doses of irradiation, the immunologic response is depressed for long periods, but not permanently.<sup>43</sup>

2. Corticosteroids. The action of corticosteroids in suppressing immunologic responses in the human is not known. They greatly diminish the cellular invasion and accompanying tissue damage in delayed hypersensitivity as they do after non-specific irritation. In large doses, corticosteroids cause lymphopenia and pronounced lymphocytic depletion in small animals, and the primary and secondary immune responses are diminished.<sup>44</sup> In man, ordinary therapeutic doses do not diminish the antibody response, nor do they cause more than a transitory lymphopenia.<sup>45</sup> It is not known if this is a specific immunologic mechanism or the anti-inflammatory action of large doses of corticosteroids that may suppress a delayed reaction as a tuberculin test or homograft rejection in man.

3. Antimetabolites. Because the immunologic response involves a stage of rapid cell division, certain agents found to have selective toxicity for rapidly dividing cells

have been used for immunosuppression. The purine analogues (6-mercaptopurine and Thioguanine) may prolong the life of skin grafts if the drug is given simultaneously with or within a few days after the antigenic stimulus.<sup>46</sup> In the guinea pig 6-mercaptopurine can inhibit development of delayed-type hypersensitivity without significantly affecting antibody production.<sup>47</sup> Folic acid antagonists may temporarily prevent delayed-type hypersensitivity in the guinea pig, but, if the antigen remains, hypersensitivity will occur.<sup>48</sup> In the dog, amethopterin can greatly prolong homograft survival.<sup>49</sup>

These nonspecific factors have disadvantages. In effective doses, all may be quite toxic to the recipient. Leukopenia results from irradiation and antimetabolites, and, with the general immunologic suppression, there is no efficient defense against infection. Corticosteroids also increase susceptibility to infection as well as inducing many other undesirable side effects. However, they are valuable since they tend to assist recipients over the most vulnerable stages in the establishment of the homograft.

#### TISSUE TRANSPLANTS AS PRACTICAL THERAPEUTICS

Although the problem of induction of homograft tolerance is far from solved, significant progress has been made in the area. Objective methods for histocompatibility testing have been developed, in vivo as well as in vitro, and some of these methods have been applied with promising results. More specific tests should be developed, and there is need for histocompatibility banks that would supply transplantable tissue as necessary. Basic research must inform the clinician concerning the nature of the transplantation antigens and their degree of ability to induce an immunologic response. Better immunosuppressive agents are needed to specifically suppress the rejection reaction but allow other immunologic facets to continue. A greater understanding of immunologic tolerance may allow individuals to be potential recipients of tissue from various individuals should there be an indication for tissue transplant.

These are some of the problems that must



be solved if tissue transplants are to become a practical means of replacing diseased tissue in clinical therapeutic medicine. □

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# Report of a Case of Cystinuria

C. E. COOK, JR., M.D.

*This paper describes the intensive treatment and follow-up of an unusual case of cystinuria complicated by a horseshoe kidney, staghorn calculus, gout and hepatic cirrhosis.*

URINARY TRACT calculi are known to occur world wide at all ages and without sex differentiation. Historically, "the stone" and its various complications, are some of the earliest recorded medical diseases.

The etiology of urinary calculi is not simple since many diseases and metabolic abnormalities contribute to stone formation. A urinary tract calculus is composed of muco-protein frame with many types of crystals deposited therein. Various types of crystals may be present including calcium oxalate, calcium phosphate, uric acid, magnesium ammonium phosphate, silicon dioxide, and cystine. The latter is the type with which we are concerned in this report.

Cystinuria, as defined by Bartter "Is a complex disorder involving the gastrointestinal tract and renal tubules,<sup>1</sup> characterized by abnormalities in the transport of the diamino-amino acids, cystine, arginine, ornithine, lysine, and possibly cysteine as well."

According to an editorial in the *New England Journal of Medicine*,<sup>2</sup> "Cystinuria is an inherited condition characterized by the excessive excretion in the urine of the four amino acids, cystine, lysine, arginine, and ornithine, and the mixed disulfide of cysteine and homocystine. The rates of excretion and the solubility in the urine of lysine, arginine, and ornithine are such as to result in no clinical problem; however, the concentration of cystine in the urine of the cystinuric patient may exceed the limits of solubility and result in crystalluria and renal calculi."

Cystinuria is not a common condition even though it was first described in 1810 by Wollaston.<sup>3</sup> The case reported here was discovered by our pathologist who reported cystine crystals in a routine urinalysis. The patient had no urinary tract symptoms but was admitted for hepatic cirrhosis, secondary to alcohol, and hemorrhoids. In fact, he had no urinary tract symptoms until 23 days after admission when he developed hematuria and we had long since begun a detailed urologic workup.

This patient gives a history of passing bright blood in stools for two days prior to admission to this hospital on July 19th, 1967. He had three to four stools daily for two days and he had one bloody stool after coming to the hospital but none since. Accompanying the bloody stools he had pain in the rectum along with itching of some hemorrhoids which he had had previously. There



are recorded findings of hepatic cirrhosis secondary to acute and chronic alcoholism in this patient as far back as June, 1962, in another VA Hospital. Since then he has had many admissions for the same condition but has continued to use alcohol heavily, admitting to drinking one-half pint of whiskey daily and much more on weekends for many years. While drinking he does not eat adequately. He says he has cut down his alcoholic intake after admission to this VA Hospital in March, 1966, and since then he has been drinking one-fourth pint of whiskey daily. He did not cut down on his alcohol intake however until he began to have pain in the liver. In July, 1964, while a patient in this hospital this patient passed two urinary calculi which were strained out of his urine. He denies having any urinary tract symptoms before that time or since; however, occasionally he has had nocturia one to two times a night. He has not passed any stones since that time. Cystine crystals were reported in his urine in August, 1965, and again in March, 1966, as well as on this admission. On previous admissions to VA Hospitals as far back as 1962, no cystine crystals were reported and none were found in the urine in July, 1964, when he passed the two stones. On all but two determinations on this admission cystine crystals or chemistry tests for cystine have been positive. This man was questioned carefully and there is no history of any of his blood relatives who have had calculi in the past. Physical examination revealed a well developed, well nourished Negro male, 37 years of age, who appeared to be somewhat chronically ill. He was alert and cooperated willingly. Blood pressure was 118/60; pulse 98; temperature 100.4 on admission; weight 140 lbs.; 5'8" in height. The sclerae of both eyes were deeply icteric; however, being a colored man, there was no visible jaundice of the skin. There was a protruding abdomen with a shifting dullness characteristic of ascitic fluid. The liver was palpable three to four fingerbreadths below the right costal margin, rather firm and not tender. There were external hemorrhoidal tags present. There was no blood on the examining glove. Otherwise the physical examination was es-

entially within normal limits. A proctoscopic examination was negative to 25 cm. except for moderate combined hemorrhoids. Electrocardiogram was normal. Chest x-ray showed both domes of the diaphragm to be elevated and there was a slight prominence of the pulmonary artery segment of the left heart border. Heart was normal in size and the lung fields were clear. Barium enema, which was done because of the rectal bleeding, reported no demonstrable abnormalities of the colon; however, large calcific densities were projected over the lower pole of the right kidney and there was a large calcific density in the pelvic region of the right kidney. A G.I. series was normal but a displacement of the duodenal bulb to the left by the large liver was reported. A KUB showed calculi in the right renal pelvis, upper right ureter, and the region of the inferior calices. An IVP showed calculi localized to the pelvis, calices, and in the right upper ureter of the right kidney. The middle calices and the left kidney pelves were not outlined by the contrast media and it is felt this could be due to nonopaque stones blocking the visualization of these portions of the left kidney. The visible portion of the left ureter appeared normal. The contrast media filled the urinary bladder. The urinalysis on admission showed a few red blood cells with many cystine crystals and the cystine chemistry test was positive. A repeat urinalysis several days later did not show any cystine crystals but the cystine chemistry test was positive. Two later urinalyses had too much blood for cystine crystals to be found. Hemogram on admission was unremarkable except for hematocrit of 31 and hemoglobin of 10.3 grams. BUN, electrolytes, serology, and urine culture on admission were normal. The total bilirubin on admission was slightly elevated at 1.6 mg.% and a later determination showed it to be down to within normal limits. Cephalin flocculation was reported twice as negative after three hours. Alkaline phosphatase was elevated at 7.4 Bodansky units. Creatinine was normal, as well as inorganic phosphorus. Several uric acid tests were done with the highest reading being 9.3 mg.%. Several 24 hour urine specimens were examined for cystine content, the highest found was 305 mg. in a total urine volume of 1900 ml. After the



urinary calculi were demonstrated the case was discussed with the urologist. It was felt that a retrograde pyelogram of the left kidney was in order to rule out the possibility of nonopaque calculi in that kidney.

After the retrograde pyelogram was done, the radiologist reported a congenital anomaly with horseshoe kidney and rotation medially of the calices of the right kidney. The calculi in the right kidney were again noted.

Repeat urine culture showed mannitol positive coagulase negative staphylococcus aureus which was treated successfully with Novobiocin and Mandelamine.

Under a conservative treatment regimen, the liver function tests returned to normal with the exception of alkaline phosphatase, and it was reduced. The uric acid level returned to normal. A mild anemia cleared. The hemorrhoids became asymptomatic. The patient was transferred to urology and at surgery the isthmus of the horseshoe kidney was divided and all of the stones were removed. The specimen consisted of one staghorn calculus 3.5 cm. in its greatest dimension and several smaller fragments of similar quite hard yellowish-tan calculi. A chemical analysis of these calculi revealed them to be primarily cystine with some uric acid in content.

The patient recovered uneventfully from his surgery and was transferred to medicine where we continued to observe and treat him. He was placed on d Penicilamine (Cuprimine, Merck Sharp & Dohme) 250 mg. four times a day for cystine control; Diamox (Lederle) for adequate diuresis and Potassium Acid phosphate to try to keep the urine alkaline. The urine pH determinations were done four times daily and varied from five to 7.5 with an estimated average of a pH of slightly over six. Several 24 hour

urine specimens for the total daily cystine excretion determination varied from normal to well above normal. Frequent single morning urine specimens were obtained and after the Penicilamine was started, these were reported as negative for quantitative cystine content.

The patient was discharged November 8th, 1967, with the following medications to be taken at home: (1) Penicilamine 250 mg. four times daily; (2) Diamox 250 mg. b.i.d. 7 a.m. and 7 p.m.; (3) Benemid .5 gm. daily; (4) Metamucil drams one daily; (5) high protein low purine diet.

He returned one month later for follow-up study. The blood urea nitrogen, creatinine, fasting blood sugar, bilirubin, thymol turbidity, and cephalin flocculation were normal. The alkaline phosphatase remained elevated at 7.6 Bodansky units. His hemoglobin was 10.7 grams and uric acid 5.5 mg.%. The first 24 hour urine specimen was 1540 ml. total volume with 185 mg. cystine. The second was 1780 ml. total volume with 249 mg. cystine. These values are slightly above the normal level of 100 mg. per 24 hours for the method<sup>5</sup> used here to determine cystine content of the urine. However they apparently are below the level of cystine formation in this patient since no cystine crystals were found in three urine specimens collected over a one-week period. The urine showed mannitol positive, coagulase positive staphylococcus aureus which was treated with tetracycline and Mandelamine. A KUB on this admission showed no abnormalities.

The patient was discharged again and was to report in three months for follow-up examination. The Penicilamine, Benemid, Metamucil and Mandelamine with the low purine, high protein diet were continued.

He returned March 18, 1968. His liver was found to be enlarged from two fingerbreadths below the right costal margin in December to four fingerbreadths below the right costal margin in March. He admitted to two periods of alcoholic beverage intake—one around Christmas and the other a week before the last admission. He had remained asymptomatic. A chart which he kept of three daily urine pH determinations showed by estimation to average about six. During the period from December to March he had

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no medications to alkalize the urine and the pH was relatively the same as when he was taking such medications.

Laboratory studies for a complete re-evaluation were done. Urine culture showed no growth in 48 hours; serology was negative; uric acid, 4.9%; hemogram, normal; cephalin flocculation, negative at three hours; blood urea nitrogen, 10 mg.%; fasting blood sugar, 97 mg.%; bilirubin, .6 mg.%; thymol turbidity, 1 McLagen unit; transaminase, 7.9 SGO units; creatinine, 1.2 mg.%. The alkaline phosphatase remained elevated at 9.4 Bodansky units. A morning urine specimen was normal and a 24 hour urine specimen was collected and examined for cystine. The 24 hour urine volume was 1300 ml. with 143 mg. total cystine.

An intravenous pyelogram was done. The KUB did not reveal any calculi in the region of his kidneys. The previous horseshoe kidney showed good function of both kidneys with nondilatation of calices or pelves. Chest x-ray and electrocardiogram were unremarkable.

#### DISCUSSION

The patient was obviously improved. Laboratory studies revealed a return to normal or near normal of the daily cystine output and all liver function tests, except the alkaline phosphatase. His liver became smaller from the time of the original examination in July, 1967, to repeat examination in December, 1967. He had been on Penicilamine two months of this time and had taken no alco-

hol. From December, 1967, until March, 1968, he continued the Penicilamine but he also had had an alcoholic intake during two periods of time. The liver enlarged during this period from two fingerbreadths to four fingerbreadths below the right costal margin. A calculated risk was taken in the use of Penicilamine in view of the proved hepatic cirrhosis and a definite benefit was proved. However it could not be determined if this liver enlargement from December to March was due to Penicilamine or the alcohol intake. Therefore it had to be discontinued after the last period of hospitalization.

Normal values of daily output of cystine vary greatly in different publications. Sunderman and Boerner in their book, *Normal Values in Clinical Medicine*<sup>4</sup> list one opinion of 45.2 mg. to 138 mg. as normal range; another opinion of 100 mg. to 200 mg. as normal range. Regardless of the set of values used, our cystine value of 305 mg. was abnormally high and the last determined of 143 mg. was within normal range. Therefore we feel that there was a significant benefit in the use of Penicilamine for cystinuria in this one patient.

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# The Use of Pantopaque Myelography in the Diagnosis of Lumbar Disc Disease

WILLIAM A. MILLER, M.D.  
KENNETH W. ELLIS, M.D.

*A review of the literature on lumbar  
myelography with some personal  
opinions and experiences.*

**MYELOGRAPHY** WAS introduced by Dandy in 1919. Air was the original contrast agent and was used until 1922. At that time Sicard and Forestier reported the use of *Lipiodol*, an iodized oil, which provided excellent radiographic visualization of the subarachnoid space. *Lipiodol* was used for many years but was found to be mildly toxic. *Thorotrast*, introduced in this country by Nosik in 1938, was abandoned quickly because of radio-activity, retention by the reticulo-endothelial system and difficulty in its removal from the subarachnoid space. *Tyrogel*, a suspension of iodinated tyrosine in gelatin, proved unsatisfactory because of pronounced pleocytosis of the cerebrospinal fluid.

*Pantopaque*, the most widely used contrast agent at the present time, was introduced clinically in 1944 by Ramsey and Stein-

hausen. The reasons for the continued use of *Pantopaque* include its ideal physical and radiographic properties and the infrequency of complications directly attributable to its use.<sup>15, 24</sup>

## TECHNIQUE

1. Some investigators prefer to pre-medicate the patient with an opiate and a barbiturate 30 to 60 minutes before the procedure. Premedication is not used by the authors since it often causes nausea and vomiting, thus complicating the procedure considerably.<sup>25</sup>

2. Prepare the skin of the back with an antiseptic of choice.

3. Raise a skin wheal with one per cent *Lidocaine* at the second lumbar space and infiltrate the area.

4. Perform a lumbar puncture with an 18 gauge needle, taking care to insert the needle as near the mid-line as possible. In patients without much lordosis the lumbar puncture can be performed with the patient in the prone position, and the position of the needle checked with the image intensifier to insure mid-line placement. The second interspace is used in order to avoid any confusion between a needle defect and a possible herniation at the third interspace. The first interspace is not used because of the



possibility of cord damage at that level.<sup>25</sup>

5. Withdraw five cc. to 10 cc. of cerebrospinal fluid and inject six cc. to 12 cc. of *Pantopaque* slowly into the subarachnoid space. Twelve cubic centimeters are used since it more often covers both the fourth and fifth interspaces in the standing position making interpretation somewhat easier.

6. Re-insert the stylet into the needle and place the patient in the prone position on the fluoroscopic table. Watch the head of the *Pantopaque* column as it begins to flow over each disc. Small, sometimes subtle defects may be revealed in this way which are otherwise hidden when the full *Pantopaque* column is present over the disc. Occasionally it is necessary to use cine-fluorography in order to obtain a record of the defect on film. If masking of a defect by the dense *Pantopaque* column is suspected, a portion of the *Pantopaque* may be removed. Suspicion of masking may be aroused by transient alteration in the appearance of the *Pantopaque* column when the x-ray table is tilted.

7. Take numerous spot x-rays including a postero-anterior, right and left posterior obliques, and prone laterals of the third and fourth lumbar and the lumbo-sacral disc spaces. Other levels should be taken as indicated. In addition to the above views a standing lateral should be taken.

8. After the x-rays have been reviewed and found to be satisfactory, pool the *Pantopaque* around the tip of the needle and remove as much as possible. If difficulty is encountered in removing the *Pantopaque* it may be necessary to re-insert the needle at a lower level.

9. Keep the patient flat in bed for at least 12 hours after the procedure to minimize the possibility of headache.<sup>16, 21</sup>

#### INTERPRETATION

The following are four basic types of lesions to be searched for when interpreting lumbar myelograms:

1. A lateral indentation of the *Pantopaque* column seen on the postero-anterior view is the most common type of defect and is the one most usually associated with a

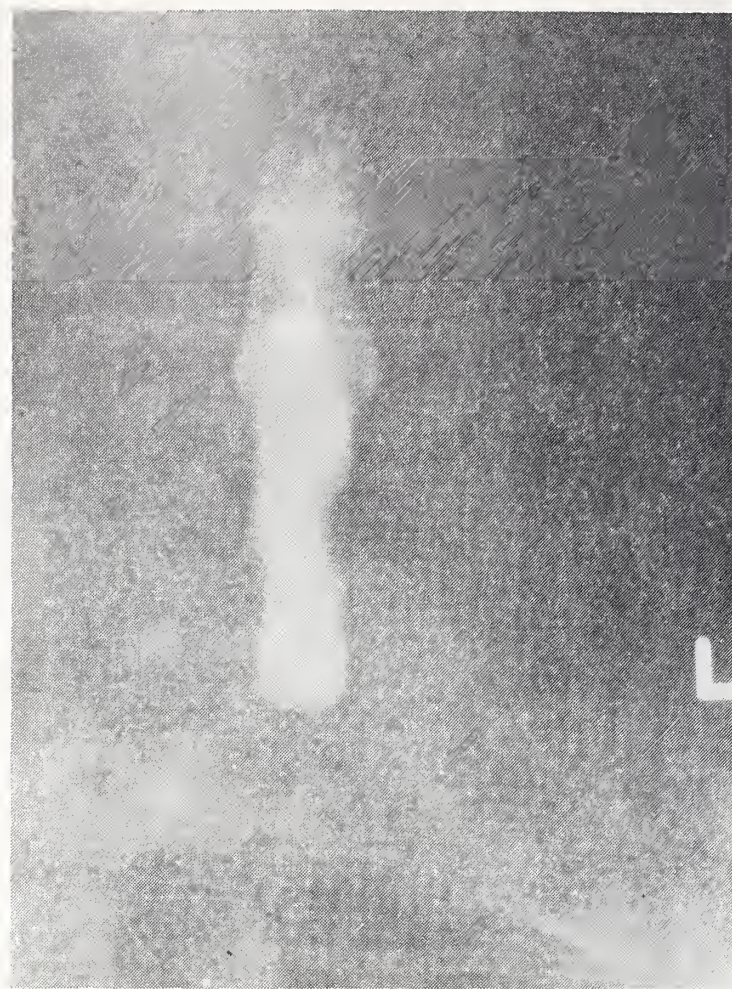


Figure 1. Myelogram showing a lateral indentation of the *Pantopaque* column resulting from a herniated disc.

ruptured lumbar disc. The defect may be quite large or very small. The size of the defect is not necessarily an indication of the amount of herniated nucleus pulposus because of the variance in spinal canal space. A lateral protrusion is usually indicated by this defect. Lansche and Ford, in a series of 660 patients reported an incidence of lateral indentations in 62.9 per cent (figure 1).

2. An hour-glass defect is usually produced by a mid-line herniation of the disc involved and occurred in 16.4 per cent of

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Figure 2. Myelogram showing a central herniation of the disc and resultant hour-glass defect.

the patients in the Lansche and Ford series. Mid-line rupture of the disc is thought to crowd the intradural nerve roots to each side, leaving a narrow channel in the mid-line over the apex of the protrusion. As the patient is tilted on the fluoroscopic table the medium flows up or down this channel producing the hour-glass defect in the postero-anterior view. This defect presents as an anterior indentation of the *Pantopaque* column on the lateral roentgenograms (figure 2).

3. Asymmetry, elevation or non-filling of the nerve root sleeve on one side occurs more commonly at the lumbo-sacral level and may be indicative of a herniated disc. This type of defect is more subtle and is often overlooked. Asymmetry, elevation or non-filling of the nerve root sleeve occurred in 14.9 per cent of the Lansche and Ford series. This defect is especially difficult to interpret at the lumbo-sacral level since the dural sac tilts backward and may not hug

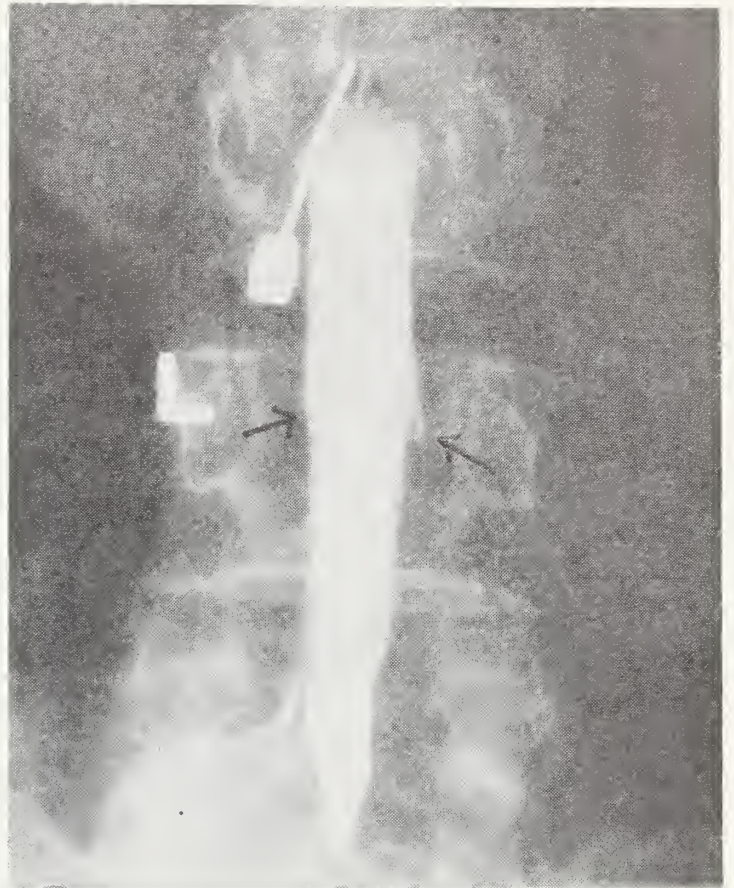


Figure 3. Myelogram showing asymmetry of nerve root sleeve.

the anterior wall of the canal as it does above this level. There may be normal variation in nerve root sleeve symmetry further complicating interpretation (figure 3).

4. Block type defects occurred in 5.8 per cent of the Lansche and Ford series and may be complete or incomplete. This defect usually has a shaggy outline and frequently is located over the disc space involved. It may, however, be located over the body of the vertebra. Lansche and Ford report three patients in their series with such blocks on the myelogram in which extruded discs were removed transdurally because of the intradural location of the disc material. Intradural disc protrusions are admittedly uncommon, but could be easily overlooked at the time of surgical exploration if a myelogram had not been done to locate the ruptured disc.<sup>10, 11, 14, 21</sup>

Complete spinal blockage frequently is associated with a spinal tumor. Highman<sup>16</sup> reported a series in which ten out of 11 tumors produced myelographic blocks (91 per cent) whereas this occurred in only 11 out of 79 patients (14 per cent) with degenerative disc disease of the lower back. A tumor usually can be differentiated from a ruptured disc by careful examination of the



myelographic films. Extra-dural tumors frequently show bony changes in the adjacent vertebral bodies or posterior elements. In the case of a malignant tumor, bony destruction is very apt to be present. Intradural tumors produce a filling defect in the contrast column which is sharply demarcated and results in no narrowing of the width of the column adjacent to this point. Displacement of the cauda equina may suggest a tumor in the absence of the characteristic sharply demarcated, concave defect of an intradural tumor (figure 4).

Disc lesions tend to cause narrowing of the contrast column adjacent to the block, may tend to push the dye column away from the pedicles, and do not cause bony changes.<sup>16</sup>

In addition to radiographic changes the spinal fluid protein is rarely found to be over 100 mg% in the case of a herniated disc whereas it is frequently well above this level in the presence of a spinal tumor.<sup>23</sup> However,

massive ruptured discs producing a spinal block may occasionally cause a markedly elevated spinal fluid protein. Ford, Ramsey, Holt, and Key<sup>11</sup> report spinal fluid proteins as high as 955 mg% in the presence of a massive disc rupture, but give no indication of the frequency of such a high spinal fluid protein.

Many feel that the myelogram is by far the most important aid in the differential diagnosis of spinal tumors and disc lesions.

The incidence of total myelographic block varies from 2.5 per cent to eight per cent in the literature.

Love and Rivers<sup>22, 23</sup> report a series in which eight out of 15 patients with surgically treated spinal cord tumors had sciatica. They also report a series of 514 cases of spinal cord tumors treated surgically at the Mayo Clinic from 1951 to 1960 of which 5.6 per cent could not be distinguished clinically from a herniated disc. Myelography with *Pantopaque* was used 22 times and provided correct diagnoses in 19 of these patients.

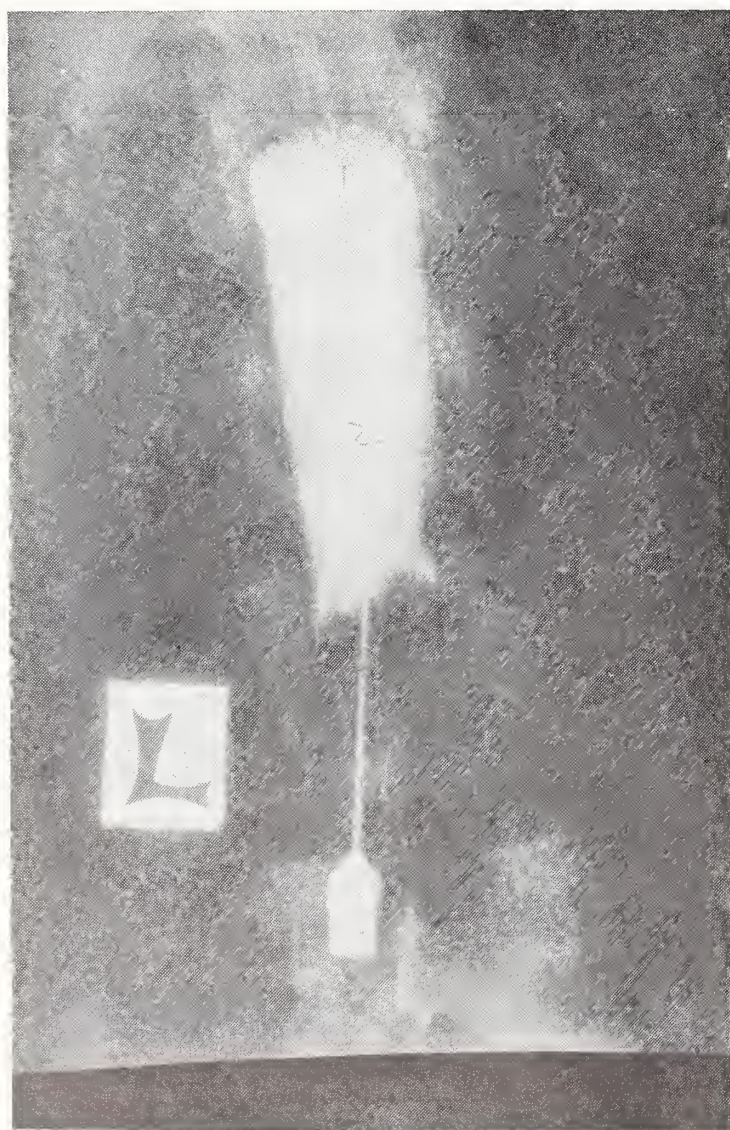


Figure 4. Myelogram showing block type defect produced by a spinal cord tumor. Note the smooth, sharply demarcated, concave margin of the defect typically seen in the presence of an intra-spinal tumor.



They found that spinal cord tumors were most commonly located in the lumbar region, and that the most common type was a neurofibroma.

Bucy and Oberhill report that in their experience, 90 per cent of the patients with sciatica have herniated discs.<sup>5</sup> Most observers do not believe that sciatica is due to herniated discs this frequently.

Less frequent causes of sciatica are:

1. Metastatic malignancies of the lumbar vertebrae or sacrum
2. Spondylolisthesis
3. Pelvic malignancies
4. Neoplasms within the lumbar and sacral spinal canal
5. Neuritis
6. Diabetic neuropathy
7. Gout
8. Tumors of the sciatic nerve

#### CAUSES OF FALSE POSITIVE MYELOGRAMS

1. Bone changes, such as spurring of the body or articular facet margins. The examiner should be able to distinguish between this and a true disc herniation in most cases.

2. Needle defect. This can be avoided by doing the spinal tap at the second interspace.

3. Varices of the epidural veins. The incidence of this controversial diagnosis is difficult to determine.

4. Extra-arachnoidal injection. This represents a technical failure resulting in a myelographic picture which is extremely difficult to interpret.

5. Epidural abscess. This usually should be diagnosed from the clinical findings.

6. Hypertrophy or puckering of the ligamentum flavum. This is probably unusual but may be of significance in the presence of a narrowed canal.

7. Post-operative adhesions. This is probably the commonest cause of confusion in myelographic interpretation. Minor defects in the *Pantopaque* column may be expected at any previously explored interspace.

8. Defect from previous myelography or lumbar puncture. This might be difficult to interpret, and the patient's old medical record might be helpful.

9. Reducible protrusions. It is probably rare for a protruding disc to indent the *Pantopaque* column and still settle back into

the interspace before surgery.

#### CAUSES OF FALSE NEGATIVE MYELOGRAMS

1. Protruded disc too small or too far lateral to produce a defect in the *Pantopaque* column.

2. Insufficient contrast material.

#### ACCURACY

Medical literature records numerous large series of patients in which *Pantopaque* was used for lumbar myelography. The degree of accuracy in the literature ranged from 60 per cent to 95 per cent with the majority of reports indicating an accuracy near 80 per cent. The development of more sophisticated equipment and techniques in recent years has considerably increased the degree of correlation between *Pantopaque* myelographic findings and disc pathology found at the time of surgical exploration.

#### COMPLICATIONS

Mason and Raaf<sup>24</sup> report carrying out over 1,500 myelograms during a 15 year period, during which time they encountered few complications. They had one death in a young man following lumbar myelography which was found to be due to a purulent meningitis. They believe that every reasonable effort should be made to prevent *Pantopaque* from remaining in the subarachnoid space at the conclusion of myelography.

Shipp<sup>28</sup> reported 1,800 cases of *Pantopaque* myelography in which no significant ill effects were noted.

Lansche and Ford<sup>21</sup> reported 253 patients which had myelography. Five per cent of these had severe headaches, most of which were controlled with aspirin. There was one fatality due to a brain abscess secondary to post-myelography purulent meningitis.

Several authors have reported *Pantopaque* embolization to the lungs as a result of intravenous injection. *Pantopaque* may be seen in the lungs on subsequent chest films if a significant amount has been injected. Fortunately, this is a relatively minor complication and usually causes only a transient temperature elevation and a short period of apprehension on the part of both the doctor



and the patient. If the *Pantopaque* is noted to be running into a vein at the time of myelography, the x-ray table should be tilted up or down to move the *Pantopaque* away from the penetrated vein. The needle should be removed. The myelogram can probably be finished if this penetration can be avoided. The *Pantopaque* can then be removed by insertion of the needle at a different level.<sup>12, 13, 17, 20, 24, 25, 29, 30, 31</sup>

A list of the reported complications of *Pantopaque* myelography, the more serious of which are extremely rare, is as follows: headache; fever (usually low grade); meningismus with nuchal rigidity; malaise; ileus; increased cell counts and elevated protein in the cerebro-spinal fluid; nausea and vomiting; purulent meningitis; arachnoiditis; diffuse aseptic meningitis; venous injection and pulmonary embolization of *Pantopaque*; bladder paralysis; weakness of one or both lower extremities; hypalgnesia.<sup>15, 21, 24</sup>

Most authors agree at the present time that the *Pantopaque* should be removed from the canal if possible. A report from the Queen's Square Hospital in London by Bering<sup>3</sup> in 1950 indicated no serious complications arising from leaving the *Pantopaque* in the canal after myelography. Davies,<sup>9</sup> however, reported a follow-up from the same institution in 1956, which indicated significant complications as a result of leaving the *Pantopaque* in place from one to 15 years.

Several series of more than 1,000 patients have been reported without serious complications from *Pantopaque* myelography.

#### INDICATIONS

There is a wide range of expert opinion regarding the indications for myelography in the diagnosis of suspected disc herniations. Some recommend its routine use prior to surgery. Others disregard the procedure completely.

There is general agreement that myelography should not be done when a ruptured disc is suspected unless surgical intervention is being considered.

Most surgeons using myelography seem to agree that it should be utilized:

1. To establish the exact level and type of the lesion and thus prevent unnecessary exploration of normal disc spaces.
2. To determine the possibility of multiple disc lesions.
3. To determine the presence of a disc lesion when clinical evidence is uncertain or indefinite.
4. To attempt to determine the cause of recurrent symptoms in persons who have had previous laminectomies.
5. To rule out the possibility of a spinal cord or cauda equina tumor or other abnormalities.<sup>21</sup>

#### CONTRAINDICATIONS

We have been unable to find articles in the literature specifically discussing contraindications to myelography. Since the advent of the image intensifier one of us (W.A.M.) has been doing myelograms almost routinely prior to low back surgery. We omit myelograms in those cases requiring surgery which have such extensive spurring that a defect would be expected at several interspaces.

A bloody tap should only postpone the myelogram for a few days. Certainly myelograms should not be performed if there is a fever of undetermined origin or if there is a history of old arachnoiditis.

Individuals with severe subjective complaints but no objective findings will rarely have a myelographic defect or a lesion at surgery. Their complaints are often aggravated by a myelogram. Occasionally a negative myelogram and knowledge that surgery is not necessary relieves the subjective complaints of these patients.

We can only deplore the use of a myelogram in compensation cases a few days after insignificant injury for the purpose of making a negative report to an insurance company. Unsettled litigation in liability cases should make one very careful in recommending myelography unless objective findings are present.

#### DISCUSSION

According to the literature, *Pantopaque* myelography produces approximately an 80 per cent correlation with subsequent opera-

tive findings. One must, however, remember that nearly all this work was done prior to the advent of the "image intensifier," "cinè-fluorography," and "television viewers" presently in use at most large hospitals. Many of the causes listed for false positive and false negative myelograms, such as bone changes, needle defects, extra-arachnoidal injections, post-operative adhesions, veiled defects, and multiple defects, should be recognized as such by a careful clinician when making an interpretation of the myelograms. With this in mind, we believe it to be possible for *Pantopaque* myelography to correlate with subsequent operative findings in excess of 90 per cent when performed using the proper techniques and when interpreted carefully in view of the clinical findings.

Since significant complications of *Pantopaque* myelography are extremely rare they should be no deterrent to the use of this procedure when properly indicated. In general, lumbar myelography should not be done unless surgical treatment is being considered.

*Pantopaque* myelography is usually indicated in those patients who have a clinical diagnosis of a lumbar disc lesion and who have disabling symptoms which have failed to respond to conservative treatment. □

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SHERATON-OKLAHOMA HOTEL

(See details of this meeting on page 37 of this issue of The Journal.)



## ABSTRACTS

### INTRACRANIAL MENINGIOMA FOLLOWED BY A MALIGNANT GLIOMA

The author reports an extremely interesting case of a man with two brain tumors. Ten years prior to his first grand mal seizure he was diagnosed as having involutional melancholia and at that time he had a cerebrospinal fluid protein of 62 per cent. Work-up at the time of the seizure showed right sided slowing of the EEG and a CSF protein of 100 mg%. Bilateral carotid arteriograms were negative. He returned six months later with continued seizures, confusion, awkward gait, numbness of the right side of the face, left facial droop and weakness of the left hand. Focal seizures were noted in the right side of the face and arm. Brain scan showed a right temporoparietal mass and air studies revealed a shift of the ventricles to the left. At operation a small meningioma was removed. The brain was severely swollen. Postoperatively and soon after return to work he developed right facial numbness and within one year a large tumor was demonstrated on work-up and found to be a malignant glioma.

The association of a meningioma with a glioma was first documented in the literature in 1910. The author has tabulated these cases, the time interval association and type of glioma. No etiologic relationship has been determined to account for this association. It is suggested that patients who do poorly following operation for brain tumor, or who have multiple tumors demonstrated may have the association of meningioma and glioma.

Intracranial Meningioma Followed by a Malignant Glioma. Case Report. Robert G. Fisher, J. of Neurosurgery, XXIX(1): 83-86, 1968.

**Reviewer's Note:** This report also reminds us of the fact that we must be wary of the psychiatric diagnosis or the "chronic brain syndrome" obscuring the diagnosis of a brain tumor. Many of us have been caught in this trap.—C. Bloedow, M.D.

### RHINITIS MEDICAMENTOSA

This article which was presented at the 24th Annual Congress of the American College of Allergists in Denver, Colorado, March 1968, is an excellent review of this subject.

As the author points out in his article, "man by nature is a sniffer." Paintings of 18th century doctors depict them sniffing the hollow handles of their walking canes which contained substances they thought might protect them against the infective feter of disease. Now that there are nearly one-half million modern chemicals and drugs used in therapeutics today, the tremendous potential of drug toxicity or idiosyncrasy can be appreciated.

The author reviews the mechanism of nasal medicamentosa. Allergy and injury from drug reactions are synergistic. Any injury to tissue produces inflammation as a host response to localize and neutralize the effects; such a response becomes allergy in a hereditary select group. Aspirin rarely causes reactions in nonallergic individuals, but if the dose is high enough, side effects may be produced in anyone. Intolerance to drugs may simulate allergic reactions. Middle-aged persons may develop allergic rhinitis and nasal polyps

from aspirin consumption prior to developing an intolerance to the aspirin.

Rauwolfia serpentina produces nasal congestion in one out of four persons but this is by a cholinergic, rather than an allergic, mechanism. This is helped only by local application of atropine.

Continued use of nasal sprays or drops containing antibiotics, antihistamines, sulfa drugs or corticosteroids eventually leads to sensitization. Anyone who persistently continues to douse the nasal mucous membrane will "pay through the nose." Synthetic ephedrine produces a greater degree of vasoconstriction and a more prolonged effect than natural ephedrine and this drug and the sulfa drugs will destroy cilia action, transform columnar epithelium to stratified squamous and dilate blood vessels which later become sclerosed.

Mercurochrome has been shown to pass through the nasal mucous membrane, the paranasal sinuses, the frontal sinuses and dura to discolor the brain in less than two hours. A 1:5000 solution of trothricin introduced into the nose will produce anosmia which may persist for months.

The author tabulates other drugs which produce allergic rhinitis symptoms and their mechanism of action. These include: ipecac, quinine, estrogens, alcohol, argyrol, tobacco, iodides, nasal douching with saline solution, antibiotics, cocaine, and privine. He reminds us that an inflamed nasal mucosa will absorb medication and inhalants more rapidly—thus destroying the protective mechanism of the nose and enhancing the inflammatory process.

This article would be well reviewed by everyone to remind us again of the hazards of overmedication and making our patients "pay through the nose."

Rhinitis Medicamentosa. Johnny A. Blue. Annals of Allergy, 26(8): 425-429, 1968.

Reviewed by C. Bloedow, M.D. □

### RECENT PUBLICATIONS

The *Journal* welcomes the opportunity to list current publications by any Oklahoma physician.

Evaluation of Trifluoperidol in Chronic Schizophrenia.

M. L. Clark, W. K. Huber, A. A. Kyriakopoulos, T. E. Ray, J. P. Colmore, and H. R. Ramsey. Psychopharmacologia (Berl.) 12: 193-203, (1968).

Chlorpromazine in Women with Chronic Schizophrenia:

The Effect on Cholesterol Levels and Cholesterol-Behavior Relationships. M. L. Clark, T. S. Ray, A. Paredes, R. E. Ragland, J. P. Costiloe, C. W. Smith, and S. Wolf. Psychosomatic Medicine, XXIX, No. 6, November-December 1967.

Use of an Agency Referred Population in Undergraduate Medical Teaching. H. J. Parker, J. F. McCoy, and T. N. Lynn, Jr. So. Med. J. 61(5): 491-496, 1968.

The Presence of a Carbonyl Group at the Active Site of L-phenylalanine ammonia-Lyase. D. S. Hodgins. Biochem. Biophys. Res. Comm. 32: 246-253, 1968.

The Time Zone and Circadian Rhythms in Relation to Aircraft Occupants Taking Long-Distance Flights. S. R. Mohler, J. R. Dille and H. L. Gibbons. Am. J. of Pub. Health, Vol. 58: Aug. 1968. □

# Tumor Board Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.\*

## CASE No. 3: Renal Cell Carcinoma

### Metastatic to the Maxillary Antrum

**PRESENTATION:** This patient is a 64-year-old Indian Female, who was admitted to the Ear, Nose, and Throat Service on the 25th of September, 1967, with the complaint of recurrent epistaxis for approximately four or five months prior to admission. She also had progressive proptosis of the left eye. The patient had been admitted twice in the last three months to an Indian hospital for epistaxis, requiring nasal packs. No blood transfusions were given. The past history of the patient is significant in that approximately 25 years ago she had trauma to the anterior face involving the nasal and the frontal areas. Also in 1966, she had a right nephrectomy, which she stated was done for stones, but which hospital records indicated was done for a renal cell carcinoma. Other significant past history is that she had a total hysterectomy approximately one and one-half years ago, and a cataract operation on the left eye approximately 16 months ago. Six weeks after the procedure she became blind in the left eye. The pertinent physical findings are mainly limited to the head. On examination of the face, one notices that the patient has obvious left proptosis. The eye is displaced superiorly

and laterally. Examination of the nose demonstrates a mass above the inferior meatus which is approximately 1.5 x 1 centimeter in size. Manipulation of this mass caused severe epistaxis requiring packing at the time of examination. A possible mass was palpated in the left sphenoid area. The patient was blind in the left eye and this eye did not respond to light. Funduscopy was not done because the pupil was too constricted. She had no numbness of the left infra-orbital nerve distribution. The hard palate appeared normal. The cranial nerves were intact. A Caldwell-Luc procedure was done and a mass was noted in the left maxillary sinus. A frozen section was obtained, which was read as benign, but final sections demonstrated renal cell carcinoma. Palpation of the medial wall of the maxillary sinus showed it to be absent. The chest x-ray is negative for any metastatic lesion.

**\*DOCTOR BOGARDUS:** Did the patient receive any form of therapy following removal of the renal tumor?

**PRESENTER:** No.

**\*\*DOCTOR SNOW:** This patient, I believe, is inoperable for two reasons; first, we have information, although no proof, that she still has tumor in the abdomen; and second, this tumor extends into the sphenoid sinus and therefore is technically inoperable. If there was no definite tumor left in the abdomen and one had an isolated renal cell

The University of Oklahoma Medical Center Tumor Board meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation and is made up of members of the Departments of Radiotherapy, Surgery, Medicine, Pathology, Dermatology, Oral Surgery, and Otorhinolaryngology from the University Hospital, Veterans Administration Hospital and Oklahoma Medical Research Foundation.

\*Assistant Head Cancer Section, Oklahoma Medical Research Foundation, Assistant Professor of Research Medicine and Associate Professor of Research Biochemistry, University of Oklahoma School of Medicine—825 NE 13th, Oklahoma City, Oklahoma 73104.

\*Doctor Carl R. Bogardus, Jr.—Associate Professor of Radiology, Director of Division of Radiation Therapy of University of Oklahoma School of Medicine.

\*\*Doctor James B. Snow, Jr.—Professor and Head of Department of Otorhinolaryngology, University of Oklahoma School of Medicine.



## Clinic

carcinoma metastatic to the ethmoid sinuses, not as extensive as this one, an attempt should be made to resect it. Doctor Bottomley, what would you recommend for this patient?

\*\*\*DOCTOR BOTTOMLEY: Chemotherapy for renal carcinoma is not very effective. Usually we try either 5-Fluorouracil<sup>1</sup> (5-FU) or Cytosan<sup>2</sup> (Cyclophosphamide) in an attempt at palliation. We have one patient now who has gone eight months with fair palliation with Cytosan. She had been treated with 5-FU previously. I would be interested in knowing whether or not Doctor Bogardus would like to try x-ray therapy.

DOCTOR BOGARDUS: I think that the best approach to her metastatic renal cell carcinoma is through radiation therapy. This would be a difficult place to treat, and quite possibly we are not going to do more than just palliate her. I'm sure she has tumor in many other areas. We could treat her, and at least stop her epistaxis and relieve some of the pain.

DOCTOR SNOW: Doctor Bottomley, would you agree with radiation therapy as the first try at palliation?

DOCTOR BOTTOMLEY: Yes, I think after completion of her radiation therapy she should be referred to the Oncology Clinic, especially if she develops other lesions, for maintenance therapy which might control her lesions longer than radiation therapy alone.

DOCTOR SNOW: Doctor Bogardus, do you feel that radiation therapy has any role to play in the management of these lesions at the time of the primary surgery of the kidney?

DOCTOR BOGARDUS: Ideally, she should have been treated with radiation therapy to the kidney bed pre-operatively and post-operatively.

DOCTOR SNOW: Would you consider treating the kidney bed now?

DOCTOR BOGARDUS: Probably not. At

this point you will not be able to cure her, and you would just be treating prophylactically. If she had extensive local disease with symptoms then radiation therapy would be indicated.

*FINAL DIAGNOSIS:* 1) Renal Cell Carcinoma metastatic to the maxillary antrum.

*TUMOR BOARD RECOMMENDATION:* Palliative radiation therapy to the left maxillary antrum to a tumor dose of 6,000 rads.

### CASE No. 4: Lymphoepithelioma

*PRESENTATION:* The patient is a 66-year-old white male, who was referred here last week from Enid, Oklahoma, with a four to five month history of soreness in the left side of his throat and painful swallowing. Approximately two months ago he developed a progressively enlarging mass in the left side of his neck. His past history is pertinent only in that about six months ago he was thought to have mumps and had a swelling in the left side of the neck, but this subsided without treatment. The physical findings are limited to the pharynx and the neck, where there is a large mass involving the entire left tonsil, both tonsillar pillars, extending one centimeter onto the soft palate, but does not seem to involve the base of the tongue. The nasopharynx is not involved and the larynx is normal. He has several large masses in the left side of his neck, mainly at the angle of the left mandible. There is a five-by-six centimeter large, firm, non-tender mass which is fixed, lying at the upper border of the sternocleidomastoid extending into the posterior triangle. There are also two small nodes, one at the angle of the left mandible, which is firm, approximately one-by-two centimeters in size, which is freely movable, and another one-half centimeter node in the left carotid triangle. The rest of the physical examination is essentially negative. The x-ray of the chest is negative. The mass was biopsied elsewhere and the pathological report was lymphosarcoma. However, the slides were reviewed here and the feeling was that this tumor was probably a lymphoepithelioma or possibly a reticulum cell sarcoma but because these were submitted slides, a more definite opinion could not be given unless another biopsy were performed.

\*\*\*Doctor Richard H. Bottomley—Assistant Head of Cancer Section, Oklahoma Medical Research Foundation, Assistant Professor of Research Medicine and Associate Professor of Research Biochemistry, University of Oklahoma School of Medicine.

<sup>1</sup>Hoffman—La Roche, Co.

<sup>2</sup>Meade-Johnson, Co.



\*\*\*DOCTOR CONDIT: Doctor Snow, how do you think this patient should be managed?

DOCTOR SNOW: The extent of the lesion is pretty obvious to everybody who examined the patient. I think the treatment of choice for him would be radiation therapy followed by composite resection of the tumor and a radical neck dissection.

DOCTOR CONDIT: . . . Because you don't think that radiation therapy alone would be able to control it. Is that correct?

DOCTOR SNOW: I doubt that radiation therapy will control it with the size of these neck masses. It might be possible to control the primary lesion with radiation therapy and pursue the metastases with only a neck dissection.

DOCTOR CONDIT: Lymphoepithelioma is usually quite sensitive to radiation therapy, isn't it?

DOCTOR SNOW: It is, in that one is likely to get a good response to radiation therapy initially in the majority of patients, but only about one in three is likely to be cured.

DOCTOR BOGARDUS: A lymphoma or a lymphosarcoma, of course, is ideally treated with radiation therapy. The purely epithelial tumors are less easily cured with radiation therapy, and the lymphoepithelioma is somewhere between the two. But, I agree that we could probably achieve a 30-to-40 per cent cure rate on the primary lesion. The neck nodes present a different problem, and I feel strongly that he should have a neck dissection. I think that we have a reasonable chance, though, of controlling the primary tumor on the tonsil itself. It would depend entirely on what he looked like after radiation therapy.

DOCTOR SNOW: Certainly if the primary tumor obviously persisted or could be proved by biopsy to persist, there would be no question about a composite resection. Our custom up until the present time has been to do only a neck dissection if there are persistent nodes and not combine this procedure with the composite resection of the primary, if the primary appeared to be controlled. Others are advocating a more aggressive approach than this with composite resection

of the primary as well as the radical neck dissection, even though the primary appears controlled. Most tonsillar lesions, now I'm not speaking of lymphoepitheliomas, but squamous cell carcinomas, will appear to have an excellent response to radiation therapy for about the first six months, and then the tumor recurs. This happens pretty regularly six months after completion of radiation therapy. If you do a neck dissection in the interval, let's say six weeks after radiation therapy is completed, it appears at that point that just a neck dissection should be done. This is a question which has not been answered. In the future I would be inclined to lean to the composite resection of the primary and the neck dissection. But, as far as our management of lymphoepitheliomas of the naso-pharynx is concerned, we have had exceedingly good luck with radiation therapy to the primary and radical neck dissection for the metastatic nodes.

DOCTOR CONDIT: Would it make any difference as to radiation therapy if this turned out to be a reticulum cell sarcoma?

DOCTOR BOGARDUS: Reticulum cell sarcoma should be treated by radiation therapy. I don't think that surgery has very much to offer for this disease.

DOCTOR CONDIT: If I remember correctly, reticulum cell sarcoma is more likely to become rather widely disseminated early than is lymphoepithelioma.

DOCTOR BOGARDUS: Reticulum cell sarcomas that already have nodes in the neck stand a very good chance of having metastatic disease elsewhere. Reticulum cell sarcoma however, is treatable and curable if it has not metastasized.

DOCTOR CONDIT: Doctor Chanes, do you have a comment?

\*\*\*\*\*DOCTOR CHANES: Because of the possibility of reticulum cell sarcoma, wouldn't it be advisable to repeat a biopsy and do special stains?

Doctor McClellan, how valuable to the diagnosis would connective tissue stains be?

\*\*\*\*\*DOCTOR McCLELLAN: Well, the reticulum stain is helpful, if positive, but this is not always the case. Ideally, with re-

\*\*\*\*Doctor Paul T. Condit—Head, Cancer Section, Oklahoma Medical Research Foundation, Associate Professor of Research Medicine, and of Radiology (Oncology), and Professor of Biochemistry, University of Oklahoma School of Medicine.

\*\*\*\*\*Doctor Raul E. Chanes—Associate Cancer Section, Oklahoma Medical Research Foundation, Instructor of Research Medicine, University of Oklahoma School of Medicine.

\*\*\*\*\*Doctor Betty J. McClellan—Associate Professor of Pathology, University of Oklahoma School of Medicine, Director of Surgical Pathology, University Hospital.



## *Clinic*

ticulum cell sarcoma, there is increased production of reticulum and the reticulum fibers appear to grow around the individual tumor cells. It doesn't always show up that way though. The increased production of reticulum is not a constant feature of reticulum cell sarcoma and the reticulum stain may not be characteristic.

DOCTOR SNOW: Since there is no place for surgery in the treatment of reticulum cell sarcoma, and since there is some doubt as to the diagnosis from the original biopsy, I think it would be a good idea to re-biopsy

this lesion prior to any treatment. I think the subsequent management is going to depend very much on what the actual cell type is.

DOCTOR BOGARDUS: Doctor Snow, I agree completely on that. I would like to see another biopsy before a definitive course of therapy is decided.

*FINAL DIAGNOSIS:* 1) Re-biopsy revealed lymphoepithelioma of the left tonsillar fossa with cervical node metastases.

*TUMOR BOARD RECOMMENDATIONS:* Radiation therapy of 7,000 rads to the primary lesion followed by a left radical neck dissection. □

## 1969 POSTGRADUATE COURSES

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For further information, write to the Office of Postgraduate Education, University of Oklahoma Medical Center, 800 N.E. 13th Street, Oklahoma City 73104

## Deductible Contributions Sought for OSMA Building

Tax deductible contributions from OSMA member-physicians are being sought to help the association finance expansion of the OSMA Executive Office in Oklahoma City. The expansion plans were approved by a special session of the House of Delegates in November.

The House authorized solicitation of voluntary contributions to offset the drain on association surplus funds being used to finance the expansion. The solicitation will be carried out in two ways. First, each physician's dues statement will provide an opportunity for the member to include a \$15.00 tax deductible contribution in his OSMA dues check. Second, in early 1969 a direct mail campaign will be carried out to seek additional contributions.

It is estimated that the entire building project, including the construction of a basement will cost approximately \$72-\$75,000. This would add an additional 2,000 square feet of office space, 1,000 square feet of basement-storage space for the use of the association and an additional 1,000 square feet of office space to be leased to the Oklahoma County Medical Society for their general offices.

The building expansion was recommended by the association's Committee on Planning. The committee report pointed out that the present building was constructed in 1956 to accommodate six staff employees and to provide meeting facilities for association councils and committees. There are presently eight staff personnel and the volume of activities is estimated to have doubled since the headquarters was constructed.

In its report, the committee stressed the fact that the problem of inadequate space exists in the areas of filing and record storage, workroom facilities, private office space for staff personnel, and conference rooms for the growing number of physician meetings.

During its May, 1968, meeting, the OSMA House of Delegates authorized

the building expansion based on a floor plan submitted by the Committee on Planning. Following the annual meeting, the committee employed an architect for a final draft of the building plans. The architect recommended including a basement in the project to gain additional low priced floor and storage space. A special session of the House of Delegates was then held in November to approve the amended plans.

The basement portion of the project will be financed entirely from the association's surplus funds and a 15-year first mortgage will be taken for the amount remaining. It is estimated that the mortgage will be approximately \$40,000 and the lease monies received from the county medical society will be used to help retire it.

The voluntary contributions will be used to offset the monies taken from the surplus to construct the basement and to help pay the estimated additional \$10,000 which will be needed to furnish and equip the new addition.

Physician-members of the OSMA desiring to make tax deductible contributions to the building fund should send them in care of the OSMA, P.O. Box 18696, Oklahoma City, Oklahoma 73118. □

## Scientific Speakers Named For Annual Meeting

Ten of the 13 scientific sections for the 1969 OSMA Annual Meeting are now complete with speakers and topics. The 1969 meeting is set for May 15th-17th in Tulsa's Assembly Center.

The scientific program committee, chaired by Albert Shirkey, M.D., Tulsa, is responsible for coordinating the activities of the various specialty groups to arrange the scientific section. The six-member committee contacted all specialty groups

in Oklahoma about participation in the program.

Samuel R. Turner, M.D., Chairman of the Scientific and Commercial Exhibits Committee, reported that this year's meeting will have more exhibits than ever before. This will include a large number of exhibit booths on hobbies of interest to physicians. Income from the exhibit spaces is used to offset part of the cost of the annual meeting.

Entertainment functions during the meeting, according to Jack Richardson, M.D., Chairman of the Entertainment Committee, will include a Thursday evening "Oyster Crack," a Friday night "Gaslight Party," and the Annual Banquet on Saturday evening. In addition, two picnic luncheons are planned for Friday and Saturday noon.

### Scientific Sections

The scientific section speakers reported so far are as follows:

**Anesthesiology:** William S. Howland, M.D., Chief, Anesthesiology Department, Memorial Hospital for Cancer and Allied Diseases, New York, N.Y. "*Biochemistry of Shock.*"

A. H. Giesecke, Jr., M.D., Associate Professor of Anesthesiology, University of Texas Southwestern Medical School, Dallas, Texas. "*Anesthetic Management of the Severely Traumatized Patient.*"

**Dermatology:** Robert W. Goltz, M.D., Chairman, Department of Dermatology, University of Colorado School of Medicine, Denver, Colorado. "*Dermatophthorosis as a Diagnostic Tool in Dermatology.*"

**Internal Medicine:** John A. Pierce, M.D., Associate Professor of Medicine, Washington University School of Medicine, St. Louis, Missouri. "*Fat Emboli.*"



**Ophthalmology:** Crowell Beard, M.D., Associate Clinical Professor of Ophthalmology, University of California School of Medicine, San Jose, California. "*Repair of Injuries to Lids, Lacrimal Apparatus, and Orbit.*"

**Obstetrics and Gynecology:** James A. Friedman, M.D., Houston, Texas. "*Non-Obstetrical Trauma to Female Genitalia.*"

**Pathology:** L. W. Diggs, M.D., Professor of Medicine and Hematology, University of Tennessee School of Medicine, Memphis, Tennessee. "*Morphology of Human Blood Cells*" and "*Practical Points in Diagnosis of Hemorrhagic Diseases and Value of the Observation of the Clot.*"

**Pediatrics:** Thomas K. Oliver, Jr., M.D., Professor of Pediatrics, University of Washington School of Medicine, Seattle, Washington. (topic not set.)

**Radiology:** James J. McCort, M.D., Associate Clinical Professor of Radiology, Stanford University Medical School, San Jose, California. (topic not set.)

**Surgery:** Alan P. Thal, M.D., Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kansas. "*Hospital Care of the Severely Injured*" and "*Severe Upper Abdominal Injury Involving Duodenum and Pancreas.*"

**Urology:** Clair E. Cox, M.D., Associate Professor of Urology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, North Carolina. "*Urinary Tract Infections*" and "*Antibacterial Therapy.*" □

**Orthopedic Surgery:** Edward L. Compere, M.D., Chairman, Department of Orthopaedic Surgery, Wesley Memorial Hospital, Chicago, Illinois  
(Topic not set)

**Neurosurgery:** William F. Meacham, M.D., Professor of Neurological Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee  
(Topic not set) □

## Excess Liability Policy Sponsored By OSMA

OSMA's Council on Insurance has undertaken sponsorship of the Insurance Company of North America's Excess Limits Liability Policy. This sponsorship will create a group participation in Oklahoma and enable physicians using this policy to collect a 15 per cent dividend being offered by the company.

Rod Frates, OSMA insurance counselor, stated that INA had approached the association and asked that the excess limits policy, known as the XIC policy, be recommended to association members as an option to their basic professional liability coverage. In return, INA would include a dividend feature with a maximum 15 per cent return to the members. The company was also willing to enter into a contract, similar to the one with the association for basic liability coverage, in return for association sponsorship.

Presently some 150 M.D.'s in Oklahoma carry this policy, but cannot collect the 15 per cent dividend until there is a group sponsorship. The association sponsorship will allow them and other M.D.'s coming in later to collect the dividend.

OSMA's Council on Insurance insisted that the contract with the company provide that sponsorship of the XIC policy will not limit the right of the physician to choose the amount of basic malpractice coverage he prefers. The contract also provides that INA will confer with the association before asking for any premium rate increase.

The XIC policy is designed to offset insurance losses above the limits of the basic coverage. In effect it increases the physicians basic liability insurance coverage up to \$1 million. In addition, the XIC policy also covers losses that the individual physician might have on other types of insurance such as automobile, home, farm owners, etc. This type of policy is often referred to as "umbrella insurance."

Unlike the ten per cent dividend being offered to Oklahoma physicians

under the basic malpractice coverage, the 15 per cent dividend on the XIC policy is based on a nationwide loss experience. However, Mr. Frates pointed out that the Insurance Company of North America and its subsidiaries have never failed to pay a dividend.

Mr. Frates also pointed out that the purchase of the XIC policy would allow many physicians to cut back the amount of basic malpractice coverage they now carry to a minimum of \$100,000. However, the OSMA Council on Insurance stated that their sponsorship of the policy should not be considered a recommendation that physicians change their amount of basic liability insurance.

Physicians interested in this type of coverage should contact their INA insurance agent for complete information on the XIC policy. Basically, XIC coverage can be summarized by stating that the policy covers all risks excluding voluntary acts. It extends both to the professional activities of a physician and to his personal liability. It is a liability insurance policy and, therefore, to cover these risks they must be declared to the company.

Under the terms and conditions of the policy, the insured must carry minimum limits of \$50,000 on his homeowners' policy, \$100,000 on his automobile, \$100,000 on professional malpractice, and \$100,000 on other coverages such as farmers comprehensive personal liability. In areas where there are no basic insurance requirements, the policy has a \$500 deductible before it begins to pay.

XIC coverage in the area where no basic insurance is required is obviously limited since basic insurance programs have been designed over the years to cover almost all problems. However, there are some risks to which a physician might be exposed. These include such things as libel and slander as a result of community activities or political service. It is also possible that an insured physician might not ordinarily or regularly rent aircraft, but might do so on a fishing or hunting expedition and in such an instance, the policy would provide coverage subject to the \$500 deductible. □



## Mental Health Conference To Study Alcoholism

Alcoholics and the problems created by alcoholism will be the subject of the Third Statewide Conference on Mental Health to be held Thursday, February 6th, in the Sheraton-Oklahoma Hotel in Oklahoma City. Over 1,000 interested persons, including physicians, are expected to attend.

Jointly sponsored by the AMA's Department of Mental Health and the OSMA, the OSMA's Committee on Alcoholism and Public Health Council are cooperating to plan the all-day program. Committee chairman, Charles E. Smith, Jr., M.D., and council chairman, Hayden Donahue, M.D., have issued a joint invitation to all OSMA and OSMA Auxiliary members to attend the conference.

The program will contain both scientific and legal papers of interest to the medical profession, paramedical personnel and lay organizations. Scott Hendren, M.D., OSMA President, will open the program at 9:00 a.m. and introduce the Honorable Dewey Bartlett, Governor of Oklahoma, for official greetings. The governor's presentation will be followed by a 30-minute dramatic film that graphically presents the problems of the alcoholic and alcoholism.

What promises to be the most interesting presentation of the meeting will be given by Mrs. Cora Louise B. of the General Services Office of Alcoholics Anonymous. Mrs. B. is a member of A.A. and will present a talk entitled "Alcoholism on the Local Level." This will be a discussion of the success of A.A. and its methods.

National legal aspects of alcoholism will be presented by a member of the National Institute of Mental Health, and he will bring the audience up to date on federal legislation involving the problem. Doctor Jack Mendelson, Director of the National Center for Prevention and Control of Alcoholism, NIMH, has been invited to give this presentation.

Bob Lester, Director of the Oklahoma Department of Public Safety,

will speak on "Oklahoma, the Law and Alcoholism." This will be a discussion about Oklahoma laws on intoxication and will include an explanation of the new chemical tests for intoxication authorized by the last Oklahoma Legislature.

The effect of alcoholism and the alcoholic on industry will be discussed by Robert L. Raleigh, M.D., Director of the Laboratory of Industrial Medicine for the Eastman Tennessee Company, a Division of Eastman Kodak. His topic will be "Accidents, Industry and the Alcoholic."

A scientific presentation on the "Responses of Alcoholics to Motion Pictures of their own Behavior" will be given by Alfonso Paredes, M.D., Associate Professor of Psychiatry, Jefferson Medical College of Philadelphia. Doctor Paredes is reported to have had outstanding results in the treatment of alcoholics by showing them motion pictures of themselves while intoxicated.

Bertram S. Brown, M.D., Deputy Director of the National Institute of Mental Health, will present a paper on "The Program Politics of Alcoholism." He will be followed by Hayden Donahue, M.D., Director of the Central State Hospital in Norman.

The final portion of the program will be a discussion by state political and governmental leaders on what their departments or organizations can do for and with the problems of alcoholism. The panel will include Rex Privett, Speaker of the Oklahoma House of Representatives; Finis Smith, President Pro Tempore of the Oklahoma State Senate; Albert Glass, M.D., Director of the Oklahoma Department of Mental Health; A. B. Colyar, M.D., Director of the Oklahoma Department of Public Health; and Lloyd Rader, Director of the Oklahoma Department of Public Welfare.

A large number of groups interested in the problems of alcoholism are being invited to the meeting. These include the Mental Health Association of Oklahoma; Oklahoma Hospital Administrators, Oklahoma Council of Churches, Oklahoma Junior League, Alcoholics Anonymous, Oklahoma Department of Mental Health,

Oklahoma Department of Public Welfare, and all OSMA and OSMA Auxiliary members.

The meeting is open to the public and there is no registration fee. □

## NLRB Ruling Could Affect Physicians

A recent decision by the National Labor Relations Board could have an effect on Oklahoma physicians. Several weeks ago the NLRB ruled that it would take jurisdiction over a medical clinic in North Dakota which was operated as a 38-physician partnership.

Employees for the clinic included 12 registered nurses, 12 practical nurses, 24 laboratory technicians, 19 radiology employees, and 73 clerical employees. The NLRB ruling subjected the employer to an election of his employees to vote whether they decide to be represented by a labor union as their collective bargaining representative.

Current regulations require that 30 per cent of the employees must sign union cards before a union can petition for an election. If the union gets the majority of the votes cast in the election, it will then become collective bargaining representative for the employees who were eligible to vote. This means that the employee will be represented by the union even if he voted against unionization. However, it does not mean that he must join the union unless the union and the employer agree to a closed shop contract making union membership a requirement of employment.

If the union gets a majority of the votes cast in the election, the employer must then negotiate with the union to set the wages, hours and working conditions of the employees.

The most natural reactions of firms that suddenly find themselves the target of union organizing are usually in violation of NLRB regulations or federal law. Labor law is enormously complex and if an employer learns of union activity he should contact his attorney immediately and do nothing whatsoever in regard to the union activities without legal advice. □



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## "Doctor of the Day" Big Capitol Hit

The OSMA sponsored First Aid Station and "Doctor of the Day" program at the State Capitol Building is a big hit with legislators and capitol complex employees. This is the fourth year the association has sponsored this program during a legislative session.

A fully equipped First Aid Station is located between the House and Senate Chambers on the Fourth Floor of the State Capitol Building. The program provides a licensed medical doctor and a registered nurse to be on call in the capitol building during the times the House and Senate are in session.

The M.D.'s to man the station are supplied by the OSMA membership and the Oklahoma Chapter of the American Academy of General Practice. The Oklahoma State Nurses Association provides the registered nurse to assist the doctor.

OSMA members interested in serving as the "Doctor of the Day" during March should contact Mr. David Bickham, Associate Executive Director of the OSMA, in the Oklahoma City office.

The state association and the Oklahoma AGP are on alternating months to supply the physician volunteers.

Drugs and equipment are supplied by national pharmaceutical companies and local supply houses.

As an indication of their appreciation, a physician serving as "Doctor of the Day" is one of the few people allowed on the chamber floor while the House and Senate are in session.

Both houses of the Legislature passed resolutions commending the medical profession at the conclusion of the last legislative session.

C. Riley Strong, M.D., OSMA coordinator for the project, said, "The 'Doctor of the Day' program is a valuable adjunct to our association's public relations and legislative effort."

Doctor Strong added that "those physicians who participate are invariably impressed with the caliber of our legislators and with the efficiency of the legislative process." □



## Alumni Association Names New Officers

Ed L. Calhoon, M.D., right, Beaver, is the new President and Adolph N. Vammen, M.D., left, Tulsa, Vice-President of the Alumni Association of the University of Oklahoma School of Medicine. They were elected October 27th at the annual alumni banquet in Oklahoma City. Doctor Calhoon succeeds George T. Ross, M.D., Enid.

Others elected were Elmer Ridgeway, Jr., M.D., Oklahoma City, Secretary, and Robert Engles, M.D., Durant, Treasurer. New trustees are Leroy L. Engles, M.D., Durant, Royce C. McDougal, M.D., Holdenville, Roy O. Kelly, M.D., Shawnee, and Earl M. Bricker, Jr., M.D., Oklahoma City. □

## Conference on State Legislation Slated for January

OSMA's Legislative Committee has finalized plans for a conference on state legislation. The meeting scheduled for Sunday, January 19th, is to be held at the Faculty House in Oklahoma City.

Program plans are for a general session beginning at 10:00 a.m. with presentations on the importance of state legislation and OSMA's role in medical legislation. A working luncheon is scheduled when participants will be asked to discuss specific bills that are known to be introduced. During the afternoon, priority bills will be given an in-depth analysis. Reports stating OSMA's official position will be studied.

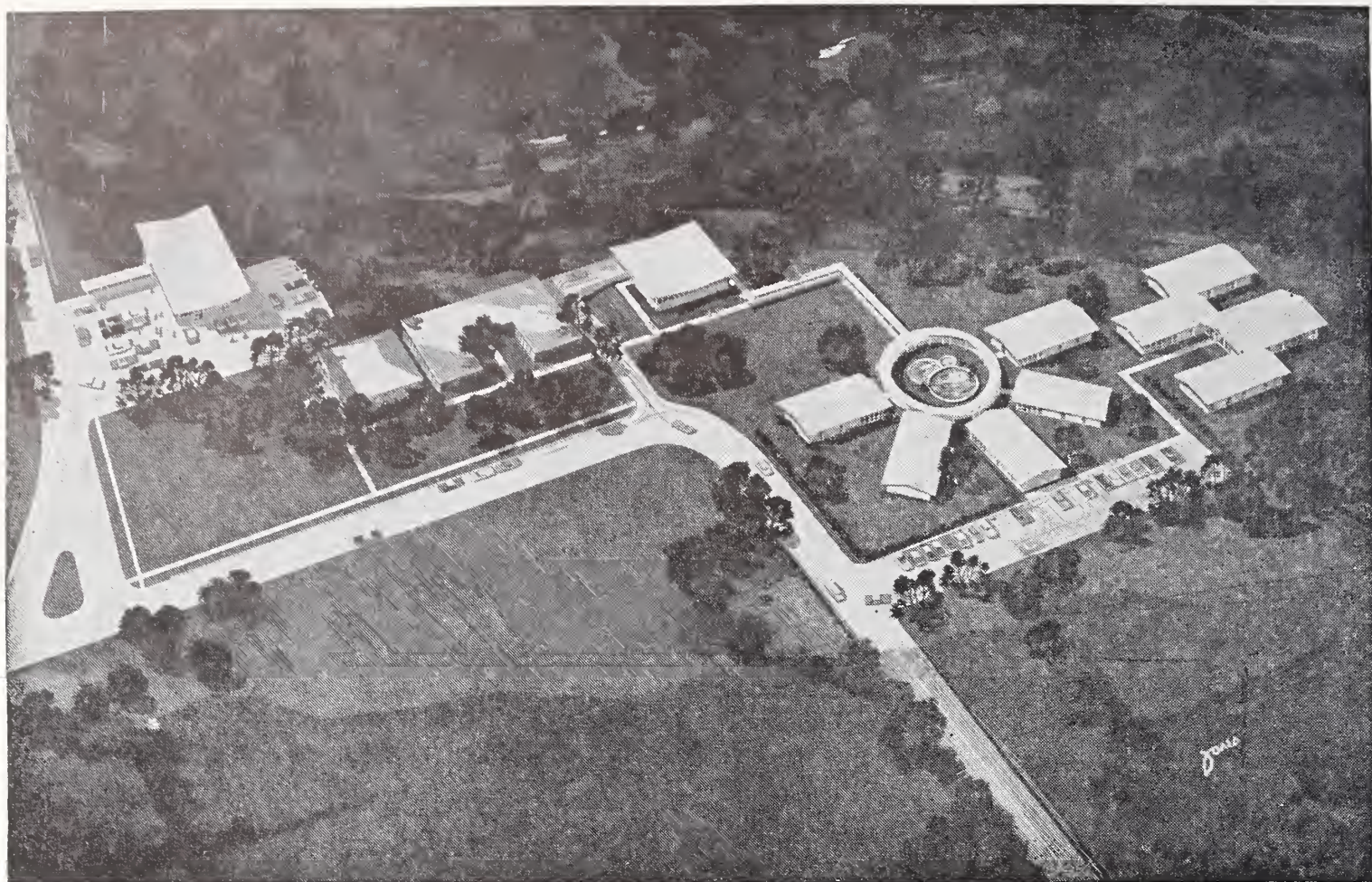
Doctor Raymond F. Hain, Chairman of the Legislative Committee, stated that details of the conference had been worked out by a special subcommittee chaired by Ed Young, M.D., El Reno.

"The subcommittee has done an excellent job in planning the conference," Hain said. "The Faculty House insures us of the necessary privacy and there are enough rooms for the eight workshops we've planned. Each member of the legislative committee has a responsibility for part of the conference program. Discussion groups will be led by committee members and afternoon reports will be given by members of the committee. We've done a lot of work and hope the attendance will justify our effort."

Over 400 physicians and their wives will be invited to the conference.

Specific bills to be discussed include: workmen's compensation, hospital lien act, abortion, public health, laboratory licensure, mental health, optician licensure and a uniform anatomical gift act. □





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## DEATHS

RALPH W. MORTON, M.D.  
1911-1968

A Sulphur physician since 1941, Ralph W. Morton, M.D., died December 18th, 1968. He was a native of Hennepin, Oklahoma, and graduated from the University of Oklahoma School of Medicine in 1940. Following his residency training in Washington, D. C., he established his practice in Sulphur.

Doctor Morton served as a flight surgeon with the Air Force during World War II.

MILTON A. NEUMANN, M.D.  
1906-1968

An Okarche physician for the past 37 years, Milton A. Neumann, M.D., died in Oklahoma City, December 16th, 1968. The 62-year-old doctor was a native of Guthrie and graduated from the University of Oklahoma School of Medicine in 1930. The following year, he established his practice in Okarche.

Doctor Neumann was President of the Kingfisher County Medical Society, a Fellow of the International College of Surgeons and had served as Mayor of Kingfisher.

LLOYD P. HETHERINGTON, M.D.  
1903-1968

Lloyd P. Hetherington, M.D., Miami physician, died December 4th, 1968. A native of Goodland, Kansas, he graduated from the University of Nebraska College of Medicine in 1930. Following several years with the Indian Service, he established his practice in Miami in 1937.

Doctor Hetherington was a Past-President of the Ottawa County Medical Society.

JAMES C. PETERS, M.D.  
1915-1968

James C. Peters, M.D., Tulsa cardiologist and internist, died December 1st, 1968 in Tulsa. A native of Pawnee, Oklahoma, Doctor Peters graduated from the University of Oklahoma School of Medicine in 1944. He had practiced in Tulsa since 1946.

He was a Fellow of the American College of Cardiologists, a Past-President of the Tulsa County Heart Association and a member of the Oklahoma Heart Association. □

## ANNOUNCEMENT

The Medical Genetics Section of the Department of Preventive Medicine and Public Health at Creighton University School of Medicine, Omaha, Nebraska, is interested in the study of patients showing an increased incidence of any histological variety of cancer in their families. Of particular interest to us is the cancer family syndrome, characterized by: 1) increased frequency of adenocarcinoma of all sites, particularly of the colon and endometrium, 2) early age at onset of cancer, 3) increased occurrences of multiple primary malignant neoplasms, and 4) autosomal dominant inheritance. To date, we have investigated six families fulfilling all of the above

criteria (Lynch, H. T., and Krush, A. J.: Hereditary and Adenocarcinoma of the Colon, *Gastroenterology* 53: 517-527, 1967), and have corresponded with physicians in Europe who have described two separate and non-related families which also fulfill the above criteria.

Physicians with patients known to have a familial cancer background, may write to Henry T. Lynch, M.D., Creighton University School of Medicine, 657 North 27th Street, Omaha, Nebraska 68131.

We invite your cooperation in our studies which will include a genealogical and medical investigation of the entire kindred in each case. □

## Immunization Campaign Speeds Up

Emmy says "March is Immunization Month" and Armond Start, M.D., Chairman of OSMA's Immunization Committee, reports that the program adopted by his committee is well underway. "We have already conducted programs at nine medical society meetings and have a full schedule for January and February." Said Start, "There are still some societies we haven't heard from but we think we'll have covered most of them by March."

In addition to the speaking engagements, the committee's program includes plans for a special issue of the *OSMA Journal* in March, devoted to immunization, special weekly health columns for all the state newspapers regarding importance of immunization and appearances on TV and radio shows.

The Governor is to proclaim March "Immunization Month."

The Oklahoma Health Department will conduct its drive in March utilizing billboards and other media.

To test the effectiveness of the campaign on doctors, the committee plans a booth at OSMA's Annual Meeting that will offer free shots to those who are not properly immunized. □

## Committee Seeking Constitution And Bylaws Changeover

At the direction of the 1966 OSMA House of Delegates, the OSMA Committee on Constitution and Bylaws is requesting all county medical societies to adopt new constitutions and bylaws compatible with those of the state association. At the present time, 20 county societies have adopted new documents.

Several counties are in the process of revising their old documents. George H. Garrison, M.D., Chairman of the OSMA Constitution and Bylaws Committee, has called on all county societies to adopt a model constitution and bylaws in order to establish a uniform terminology and description of membership status throughout the state. □



## BOOK REVIEWS

**DIABETES MELLITUS.** George J. Hamwi, M.D., and T. S. Danowski, M.D.; cloth, 250 pp. New York: American Diabetes Association, Inc., 1967. \$2.50.

The growing tendency to prejudge adversely highly condensed material pertaining to a broad subject as just another repetitive synopsis is completely unwarranted in appraising the American Diabetes Association's supplement to *Diabetes Mellitus: Diagnosis and Treatment*, Volume 1, published in 1964. Similar to Volume 1, this up-to-date contribution of 47 authorities covers a far wider range of subjects than the title indicates. Both of these small volumes, written in short chapters of four or five pages, provide the busy physician with practical, concise guidelines for dealing with the common and the unusual problems of diabetic patients of all ages. They are equally useful as authentic reference sources for medical students, physicians in training, and for instructors. Since the second volume does not replace but supplements the first volume with many new titles and contributors, these two inexpensive volumes (Vol. II, \$2.50 or combined price of Vol. I and II, \$4.25) provide the experience and current opinions of approximately 80 experts. Every physician and student who has an interest in diabetes mellitus will find these authoritative books highly useful.—*J. Darrel Smith, M.D.*

**THE COMING REVOLUTION IN MEDICINE.** David D. Rutstein, M.D. 180 pp. Cambridge: The M.I.T. Press. \$4.95.

This monograph is based on a series of four lectures delivered at the Massachusetts Institute of Technology in late 1966. The author, Professor and Head of the Department of Preventive Medicine at Harvard Medical School, states in the introduction, it is his aim "... to survey the present chaotic medical scene and make an assessment of the needs and resources of American

medicine with an eye towards a systematic plan for the future." He states, "I began by examining some of the reasons for the widespread disquietude resulting from the paradox of modern medicine."

Rutstein has written a provocative book which concisely reviews the present state of American medicine and suggests alternatives to it. He points out that, despite medical advances, there has been, for almost two decades, a steady leveling off in our health progress. Curiously, this change in trend has coincided with an enormous expansion in our national medical research program. The lengthening of life expectancy in this country has practically stopped and is now shorter than that in 21 other countries. In 1959, the U. S. was eleventh among all countries in maintaining low infant mortality, but by 1965 was in eighteenth place. The author rejects the frequently made suggestion that the difference in infant mortality is due to differences in criteria and in reporting methods.

Rutstein states that the discrepancy between the mushrooming of medical science and the slowing improvement in the actual health of our people is the paradox of modern medicine. He attributes this to a series of pressures, exposition of scientific knowledge, spiraling costs, changing public expectations, the increasing changes in the structure of our accelerating, depersonalized society. He believes that our medical care system is "tangled and torn." "Doctors settle where they will with large numbers in suburbs and few if any in the country or the slums of our large cities. Hospital centers tend to be 'self-centered'."

One chapter is devoted to the impact of contemporary technology and automation. A significant portion is devoted to "interaction between doctor and machine" in which the author discusses the development and use of machines immediately concerned with the life or health of the

patient, such as the artificial kidney, the heart-lung machine and others.

In the final chapter, the author proposes a plan for the medicine of the future. His plan "... will take advantage of current trends and the pressures building up within our medical care system. The plan will be directed toward the solution of long-range problems and not towards such immediate transient ones as the actuarial soundness of paying physicians on a fee for service basis in certain third party programs." Basically his proposal includes the establishment of a regional structure of medical care programs, more effective use of medical manpower, determination of ways in which the physician's time may be more strategically applied and the incorporation of rapidly advancing automation and technology. It is interesting that many of his predictions, such as the uses of nurses to do complex tasks previously reserved for physicians, are already coming true.

It is quite clear that Doctor Rutstein likes to shatter illusions. He advances his points by prodding us with a series of hard jabs to our equanimity. While many will not agree with him, it is clear that he raises hard questions which must be answered.—*H. D. Riley, Jr., M.D.*

#### **PATHOLOGY OF THE KIDNEY.**

Robert H. Heptinstall, M.D., Associate Professor of Pathology, The Johns Hopkins University School of Medicine and Pathologist to The Johns Hopkins Hospital, Baltimore, Maryland. 835 pp. Boston: Little, Brown and Company, 1966. \$28.50.

This is an excellent book which will take its place with other classics such as Allen's *The Kidney* and that of the same title by Homer W. Smith. The author draws on a huge experience with renal biopsy material as the basis of understanding the early stage and progression of renal diseases. He emphasizes the more frequent and significant diseases of the kidney, but he also includes sec-



tions on less common entities such as the renal lesions which occur in certain unusual diseases such as macroglobulinemia, Fabry's Disease and the glomerular lesions of certain types of congenital heart disease. The author discusses comprehensively the prevailing differences of opinion regarding the morphologic changes which constitute chronic pyelonephritis. There are three chapters by contributing editors which are all of high quality. That on the development of the kidney and the chapter on congenital malformations, both by Kissane, are excellent. The chapter by Porter on renal transplantation brings the book up to date. The author has, without apology, omitted discussions of renal physiology and tumors of the kidney and the clinical sections are abbreviated. This is entirely appropriate since this work is intended primarily as a textbook of pathology.

There are more than 2,000 references cited at the end of each of the 27 chapters. The book contains 390 illustrations and these are of high technical quality.

This is an excellent book which can be highly recommended.—*H. D. Riley, Jr., M.D.*

**THE HUMAN ADRENAL CORTEX: ITS FUNCTION THROUGHOUT LIFE.** Ciba Foundation Study Group No. 27. Edited by G. E. W. Wolstenholme and Ruth Porter. Paper, 146 pp. with 26 illustrations. Boston: Little, Brown and Company, 1967. \$4.25.

This small volume contains the transactions of the Ciba Foundation Study Group on "The Human Adrenal Cortex: Its Function Throughout Life," held September 14th, 1966. It consists of eight papers and their discussion by 21 of the world's leading authorities on the subjects.

While much has been written about the adrenal cortex, this volume makes a worthwhile contribution in updating and summarizing some specific facets in a lucid and succinct manner. Of particular worth is a detailed consideration of adrenocortical function from "womb to tomb" in a single volume. In ad-

dition, discussions of the adrenal cortex in pregnancy, surgical stress, acute medical stress, and chronic disease (including hypertension, neoplastic disease, obesity, psychiatric disorders, connective tissue disorders, chronic liver or renal disease, malnutrition and chronic infections) add merit to the volume. As is usual with these study group volumes, information brought out in the recorded discussions of the formal papers makes interesting and worthwhile reading.

This book can be recommended to all physicians as an informative evening's reading, and as a current and concise reference for the specific aspect of adrenocortical function covered.—*J. Rodman Seely, M.D., Ph.D.*

**AMINO ACID METABOLISM AND GENETIC VARIATION.** Edited by William L. Nyhan, M.D., Ph.D. 295 pp. New York: McGraw-Hill Book Company (Blakiston Division), 1968. \$22.50.

This volume represents the proceedings of a conference on amino acid metabolism which took place in the Grand Bahama Islands in the Spring of 1967. It is a comprehensive and illuminating survey of a field which has undergone striking transformation and development within recent years. The participants include 53 investigators, many of whom have made important contributions in this area.

The majority of the book is concerned with inherited disorders of amino acid metabolism that are expressed as clinical diseases. It is divided into 11 parts. Phenylketonuria is comprehensively analyzed in the first three chapters. This section introduces the fundamental theme of the book; that many inborn metabolic defects of man are emerging as clinical entities with manifestations ranging from complete absence of enzyme activity at one end of the spectrum to slight impairment at the other. Developmental, metabolic and clinical consequences may vary widely, depending upon the timing of maturation of enzymes or the degree of ultimate impairment of their

function. Part II is concerned with genetic and enzymic heterogeneity and their various implications in this field. Parts III through VII cover a wide variety of inborn errors of amino acid metabolism such as histidinemia, the urea cycle and lysine and several others. Part X reviews the problems relating to the lack of sufficient amino acids and protein for nutritional purposes, a major, world-wide problem. The final section is devoted to treatment. Although it is useful, it does not have the same degree of depth as the other chapters of the book. The contribution by Tocci is an excellent compilation of chemical methods for the screening and diagnosis of metabolic disorders.

Generally speaking, all sections are of high quality and represent important up-to-date references in their respective areas, much of the information not having been published before. However, there is some redundancy.

This will prove to be a valuable reference for those concerned with the field of inherited disease.—*H. D. Riley, Jr., M.D.*

**HANDBOOK OF CONGENITAL MALFORMATIONS.** Edited by Alan Rubin, M.D., Research Associate in Obstetrics and Gynecology, University of Pennsylvania School of Medicine. 398 pp. Philadelphia, Pennsylvania: W. B. Saunders Company, 1967. \$14.00.

This is a systematically arranged reference manual in "dictionary" format composed of over 700 congenital defects and syndromes. Malformations are arranged by the organ system or anatomical areas involved and each defect is alphabetized within the separate chapter. Each abnormality is then briefly described under five subheadings, placing emphasis on the embryology, anatomy, etiology and frequency with which it occurs. Alternate names as they occur are listed. Treatment and prognosis are subsequently outlined.

This book is aimed primarily at the practicing physicians but also is directed secondarily to educators,

Continued on page xxiv



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Continued from page xxi

social workers and other health personnel. The editor, a practicing obstetrician and gynecologist, has collaborated with 23 contributors in the preparation of this handbook. Since the book is composed of multiple brief entries, it is useful for rapid reference, but not for detailed discussion. Perhaps the weakest portion is that on therapy. The recommendations in many cases are all too brief and dogmatic. Although the book has been designed for practicing physicians, medical students, educators and para-medical personnel will find it useful.—*H. D. Riley, Jr., M.D.*

**ATLAS OF PRECAUTIONARY MEASURES IN GENERAL SURGERY.** Ivan D. Baronofsky, M.D., Ph.D., Professor and Chairman, Department of Surgery, Hahnemann Medical School, Philadelphia, Pennsylvania. Cloth, 281 pp., with 111 plates and 132 figures. St. Louis: C. V. Mosby Company, 1968. \$23.50.

Doctor Baronofsky contends that too many postoperative complications begin in the operating room, and this volume deals with "defensive surgery" to prevent these in commonly performed, general surgical operations. The text seeks to supplement both atlases of surgical technique as well as textbooks of surgical complications and it does this well. It is not, however, a substitute for either. The author presents a personal point of view based on his own experience giving alternatives in some procedures, but his own, single preference in most.

Doctor Baronofsky touches on many points of operative technique which are often omitted, even in atlases of surgical technique. Specifically he mentions such points as movement of the surgeon to the left side of the patient for better palpation of the porta hepatis and the need for mental, three-dimensional visualization of the operative field by the surgeon. His recommenda-

tions concerning various, frequently performed procedures are quite specific and helpful. The choice of operations, which includes 25 procedures, covers the field well from gastric and biliary surgery to radical mastectomy and the excision of varicose veins.

Two sections particularly well designed are the description of the repair of inguinal hernias (including sliding hernias) and the techniques for ileostomy, colostomy and closure of colostomy.

The plates and figures by Daisy

Stilwell are excellent and illustrate beautifully the additional capability of a medical drawing to clarify the author's points. In summary Doctor Baronofsky has added a valuable supplement to established texts dealing with the art of operative surgery—the need for which is often forgotten. In the preface the author states, "If this book results in one extra night's rest for a surgeon, it has served its purpose." The text may also result in many patients enjoying many extra nights' rest as well. —*E. Ide Smith, M.D.* □

## Miscellaneous Advertisements

**PATHOLOGY RESIDENCIES AND INTERNSHIPS** available in 600-bed general hospital. Fully approved four-year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns — \$6300; residents — \$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

**WANTED: EXPOSED X-RAY FILM FOR SALVAGE.** What have you? Write today! Murray, 3305 Bryan, Dallas, Texas 75204.

**DESIRE ASSOCIATION or GROUP** practice in the Tulsa area beginning August 6th, 1969. Graduate of Baylor College of Medicine in 1963; residency at Texas Medical Center; completing military obligations. Contact R. Bryan Boatright, M.D., 6 C Cunningham Street, Westover Air Force Base, Massachusetts. Phone 413 557-7251 or 413 593-5258.

**MEDICAL SPACE** ready for occupancy now. Dental, \$150.00 per month; General, \$300.00 per month; General, \$650.00 per month. Parking, utilities paid, good location. Call D. Sieber, CE 2-4206.

**TWO INTERNISTS**—Board eligible or certified, wanted by multi-specialty group in Central Texas associated with 100-bed hospital; \$20 — \$24,000 annual salary; early partnership; no investment. Write G. H. Wahle, Jr., M.D., King's Daughters Clinic, Temple, Texas, or call collect 817 778-5501.

**FOR LEASE**—Across the Expressway from Baptist Hospital at 3333 Northwest Expressway, Oklahoma City. 2,100 square feet, ideally suited for a general practitioner. Will custom design to your specifications all or any part. Space available January 1st, 1969. Phone 848-4877 or 843-6720.

**ANESTHESIOLOGY RESIDENCIES** available—Fully approved two-year program in 600-bed general hospital includes neurosurgery, thoracic, and cardiovascular surgery. Annual anesthetics administered—over 13,000. Stipend—\$8100 and \$9300. Board and laundry. A. N. Heinrichs, M.D., Director, Department of Anesthesia, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104. □



## INTERNATIONAL HEALTH

Each year the members of the Woman's Auxiliary to the Oklahoma State Medical Association have been asked to devote some of their efforts to working on International Health projects. We had a successful year this past year and have added several new projects to our older ones this year.

Our newest idea was sent to us by the national chairman for International Health just in time for us to try it out for Christmas this year. We made small dolls out of used nylon hose and scraps of material. These were sent to Project Concern and then shipped on to children in hospitals throughout the world. Some of our more talented members crocheted or knitted small exercise hand balls for these same children.

Marco, Medical Amateur Radio Council, which is chartered as a charitable organization, is making a great impact around the world publishing information for missionary doctors in the far off corners of the world. They are establishing non-commercial, non-profit amateur radio networks to help give emergency consultations to missionary physicians. Their main project is to establish ham shacks in mission hospitals in all parts of the world to bring better medical care to the developing regions of the world. We can all help in this project by do-

nating used ham radio equipment. These missionary doctors who need help in diagnosing certain patients' illnesses are able to call in on their ham radio equipment to Duke University to seek advice whenever they find it necessary to do so.

The Medical Journal Program is meeting with great success here and abroad. This is a program where American physicians can send their used copies of medical journals regularly to a foreign colleague. The ones most often requested are the specialty journals, but the general medical publications such as the *Journal of the American Medical Association* is also welcome along with the *New England Journal of Medicine*. Send the titles of the journals you wish to offer to Doctor Reid and they will select from their cross-indexed file the name and address of an overseas doctor in the same field of medicine who has requested to be on their mailing list.

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Please save your sample drugs again for World Relief, we had such a big shipment last year it may be hard to top it.

Mrs. John A. Kienzle  
Oklahoma State Chairman  
International Health ☐



**OSMA dues remain unchanged for 1969.** State association dues are \$75 for 1969, and AMA dues, also unchanged, are \$70. The due date is January 1st, although members have until March 31st before becoming delinquent. Dues statements contain two optional fees: Opportunity is provided for \$20 dues to the Oklahoma Medical Political Action Committee (not tax deductible) and for a \$15 contribution to the OSMA Building Fund (tax deductible). The OSMA headquarters building will be expanded during the year, by action of the House of Delegates, to accommodate an acceleration of activities.

**The 90th Congress considered over 1,400 bills related to health or the medical profession.** Thirty measures were enacted. AMA submitted twenty-nine statements to congressional committees regarding fifteen bills. Of the fifteen proposals, AMA favored ten, opposed one, and voiced partial support or opposition or suggested an alternative approach to the remaining four.

**The U. S. Department of Health, Education and Welfare** has proposed that routine investigations to determine welfare eligibility be discontinued in favor of a simple declaration of need. Investigations would be carried out only to validate such disability claims as blindness or if deemed necessary to check questionable information from an applicant. The federal agency believes it can compel states to follow this directive, but resistance can be anticipated.

**State physicians exceeded their quota** in supporting the successful campaign to pass State Question 463 which met with voter approval on December 10th. Doctors were asked to provide \$15,000 for advertising and other promotional purposes, and \$15,055 in vol-

untary contributions was raised. OU alumni contributed \$6,923.24, medical school faculty members raised \$4,956.76, and non-OU physicians supplied \$3,175.00. The bond issue authorized by the voters will make \$26,870,000 available for the expansion of the medical school.

**Paychecks Shrinking!** According to the Wall Street Journal, the average weekly paycheck of nonsupervisory workers is less today in terms of buying power than it was in 1965. In '65, the average check was worth \$72.72, but despite rising wages the typical worker only received \$72.32 in purchasing power last September after his dollars were eroded by cost of living increases and greater federal taxes.

**Unions have a technical majority of "friends" in the U.S. Congress,** but do not have a working majority since Senators and Representatives who lean toward labor seldom get completely together on a single controversial issue. The AFL-CIO's Committee on Political Education counts as friends of labor those legislators who received union financial support during their campaigns or who voted "right" at least 50 per cent of the time on major labor bills. COPE counts 58 Senators in this group (majority 51) and 221 Representatives (majority 218), both majorities down after the 1968 elections.

## MEETINGS:

**Feb. 6, 1969**—OSMA Mental Health Conference, "Alcoholism," Sheraton-Oklahoma Hotel, Oklahoma City

**May 15-17, 1969**—OSMA Annual Meeting, Tulsa Assembly Center, Tulsa

**July 13-17, 1969**—AMA Annual Meeting, New York City □



The

JOURNAL

FEBRUARY  
1969  
Vol. 62, No. 2

of the Oklahoma State Medical Association

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in cerebrovascular disorders

# Arlidin increases blood flow

**A**rlidin decreases cerebral vascular resistance, increases cardiac output, helps maintain mean arterial pressure.

**A**rlidin helps control vasoconstriction, vasospasm, and ischemia.

**A**rlidin may thus relieve symptoms of cerebrovascular insufficiency,

such as vertigo, light-headedness, and mental confusion.

**A**rlidin also increases blood flow to the eye and inner ear to help manage ischemic disorders of those organs.

**A**rlidin is well tolerated and relatively free of severe adverse reactions.

DOSAGE: Usual effective dosage  $\frac{1}{2}$  to 1 tablet t.i.d. or q.i.d.; increased, if necessary, to 2 tablets t.i.d. or q.i.d. Parenterally, 0.5 cc. by subcutaneous or intramuscular injection; increased gradually to 1 cc. one or more times daily, as needed. SIDE EFFECT: Occasional palpitation. PRECAUTIONS: Use with caution in the presence of a recent myocardial lesion, paroxysmal tachycardia, severe angina pectoris, thyrotoxicosis. CONTRAINDICATION: Acute myocardial infarction. SUPPLIED: Tablets, 6 mg., scored; bottles of 100 and 1000. Parenteral, 5 mg. per cc., 1 cc. ampuls (5 per box); 10 cc. multiple-dose vials (1 per box). CONSULT PRODUCT BROCHURE.



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## *At The Medical Center. . . International Child Health*

OSMA  
JOURNAL / editorial

WORLD ATTENTION has been arrested recently by the mass deaths from starvation of thousands of children in a secessionist African state. News is available promptly and to all; people everywhere share vicariously in the grief of far distant persons, and we grieve particularly when children suffer. As sensitive human beings we are anxious that good health be the lot of all children. As inquisitive physicians we are eager to learn more about the diagnosis and control of disease. Our social conscience, notably that of our younger colleagues, medical students and house officers, tells us that malnutrition in Biafra, while exacerbated by war, is a direct expression of poverty and ignorance based on economic and social inequality. And we reflect that our own infant mortality figures, while low in the world at large, nonetheless compare unfavorably with those of a dozen or more other highly civilized countries. Some of our underprivileged children die unnecessarily from malnutrition, infectious disease and diarrhea—the chief causes of death among most of the world's small children.

Examples such as these served as the stimulus for the creation of the Division of International Child Health at the Children's Memorial Hospital, University of Oklahoma Medical Center. Study of the health problems of children abroad provides an opportunity to bring relevant knowledge to bear on similar medical problems present in our own children. One example is the application of new knowledge in the prevention and treatment of dehydration due to diarrhea. At a more fundamental level, we have become increasingly aware of the stunting of psychological and intellectual growth brought about by severe malnutrition. Here our knowledge is derived almost exclusively from studies of children in distant lands. On the broader social scene, we are only beginning to perceive the contributions that the experience of community health programs in developing countries can make to the costly efforts now being undertaken to provide better medical care to deprived children in this country.

The North American who becomes an effective participant in the medical and social problems of a developing country sooner or later becomes aware that his own life and knowledge have been enriched by the experience. New knowledge derived from exposure to medical conditions that are uncommon or nonexistent here is an obvious gain, but more fundamental than this is his acquisition and appreciation of new human values. He will, by way of superficial illustration, be gratified by the appreciative responsiveness of Latin Americans to his halting efforts to communicate in Spanish, and he will somewhat sheepishly contrast their warm encouragement of him with the more likely impatient irritation of the North American in the reverse situation.

Meaningful involvement in international health is thus a two-way street in which the North American has much to contribute and much to learn, both in medical problems and in human values. New knowledge, whether of local or distant origin, is quickly available to all people everywhere through the printed word. The unique elements in international exchange then are the values, professional and human, derived from the exchange of persons.

The exchange of persons is a major goal of the recently created Division of International Child Health in the Department of Pediatrics, Children's Memorial Hospital, University of Oklahoma Medical Center. It is planned to establish an affiliation with a department of pediatrics in a Latin American medical school, which will serve as a base for patient-care, study, teaching, and research for faculty, house officers and students from Oklahoma, and will send the counterparts of these to the local scene. It is further hoped to attract support for a pilot program of linguistic, medical and cultural orientation of selected Latin American medical school graduates so as to prepare them for effective participation as interns in first quality United States hospitals.

The University of Oklahoma has had con-



siderable experience and success in the linguistic and cultural training of Peace Corps trainees prior to their assignment to Latin America, as well as in the mounting of special courses for Latin Americans on the Norman campus. The University's Division of International Training Programs will contribute significantly to the proposed International Child Health Program, not only in the pre-internship training of Latin Americans as outlined above, but in the intensive preparation of North Americans about to depart for assignment in the cooperating Latin American medical center.

The planned orientation toward Latin America is particularly appropriate for American pediatricians, whose academy has for decades included members from all the Americas. It is also a further step in the direction already taken by the University of Oklahoma Department of Pediatrics, which has, for some years, maintained collaborative research programs in Mexico and Central America.

International medical exchanges "enable us to develop an awareness of how people in other countries live and do things," comments C. Clement Lucas, Jr., President of the Student A.M.A. "The only real hope for the future is a mutual understanding among the peoples of the world."—*Nelson K. Ordway, M.D., Department of Pediatrics, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma* □

## Medicare Mousetrap

**A** BEAUTIFUL grand design is coming to fruition—that is if you favor the socialization of America's health care system.

Way back in 1965, the American Medical Association and the major insurance companies warned that the Medicare program would be inadequately funded, but Congress yielded to the optimistic cost estimates of the Department of Health, Education and Welfare. The prediction of financial distress has come true, but federal officials have neatly laid the blame for the government's problems at the feet of physicians and hospitals, whom they accuse of inordinate rising

prices and over-utilization of both Medicare and Medicaid.

Hospital costs have indeed risen sharply, primarily due to being brought within the jurisdiction of the federal wage and hour laws. Medicare has taken its toll, too, since the federal interpretation of paying hospitals their "reasonable costs" has prohibited inclusion of the operating costs for obstetrical facilities, nurseries and emergency rooms. The net result is that Medicare patients have not been paying their way, and the deficits have been necessarily passed along to other consumers.

Medicaid—the federal-state program for indigents—began paying hospitals their reasonable costs in 1966, and since its accounting system was not as restrictive as Medicare, this program presumably picked up part of the Medicare deficit.

Meanwhile, the State Department of Public Welfare announced in late 1968 that it could no longer afford to pay hospitals according to the same formula. As a temporary measure, hospitals were given the choice of signing a contract for 110 per cent of last year's costs or, as a consequence of not signing a contract, to be paid only 100 per cent of last year's costs. Another concept is now being proposed: To pay hospitals their "prime costs" based only on the costs of day-to-day operation and excluding reserves for depreciation, etc. Hospital administrators say that none of these methods provide adequate reimbursement for their actual costs.

There is no doubt that the welfare department is confronted by a dilemma in paying for health services in the face of rising costs and utilization. Honest disagreement exists as to what constitutes reasonable costs for hospitals, particularly since payment based on a straight audit of total hospital costs does not provide incentive for efficiency in operations. But the fact remains that any program which pays less than reasonable costs will simply compound the deficits brought about by Medicare's reimbursement formula.

We are about to go full cycle in our two and one-half years under Public Law 89-97. The people who are paying the taxes to support Medicare and Medicaid are about to get the treatment again . . . because the hospital



deficits generated by government programs can only result in increased charges to the working population, which amounts to double taxation. The buck passing comes to rest on the shoulders of those citizens who are trying to remain self-reliant, and it is already being reflected in disproportionate charges and higher private insurance rates.

By under-funding Medicare and Medicaid, and by requiring hospitals to subsidize the programs, the government has planted the seed for widespread dissatisfaction among the working population. This dissatisfaction is sure to create a reaction, and one direction middle-class America might take would be to clamor for government relief. What a lobby we will have if the *taxpayers* become organized in their own behalf!

Physicians have not been forgotten either. On December 31st, outgoing Secretary of Health, Education and Welfare—Mr. Wilbur Cohen—announced that he was leaving the premium for physicians' services under Medicare unchanged for the period July 1, 1969 through June 30, 1970. His decision to hold at the \$4 monthly rate was made despite a conservative estimate by government actuaries that the cost during this time would require a minimum premium of \$4.40.

Thus, we are faced with a predicted deficit of some \$200 million. Cohen said the problem was that physicians' fees had risen seven per cent in the period 1965-67, and are expected to rise five per cent in 1969. In addition, government actuaries expect Medicare utilization to increase by two per cent.

His solution is to instruct Medicare carriers to pick up the deficit funding by retarding the recognition of new customary charge levels and by delaying as much as one year the recognition of any change in the prevailing fee range within a given eco-

nomie area. While an actual fee freeze has not been invoked, there is certainly a chill in the air.

Here's another prediction: The economy measures will not keep the program within the budget. Some fee increases will have to be made and utilization by Medicare beneficiaries will continue to rise in the absence of any governmental consumer education regarding the conservation of Medicare's "Blue Sky" benefits.

So, it's most likely that the trap will be sprung on both physicians and hospitals . . . by under-funding both of these basic health services and by transferring the public wrath against the providers.

It may be true that some physicians have charged too much or provided greater-than-necessary quantities of service. They're in the vast minority, however, and effective means of control have been available through our claims review committees since July 1, 1966.

There does not appear to be anything that we can do to stave off a crisis in regard to governmental health programs, because we do not control those situations which are created for us.

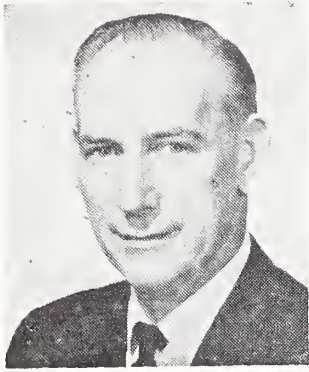
However, let us at least not be surprised that the "Honeymoon" is over; let us be charitable with the carriers of these government programs who are trying to operate without adequate funding; and, finally, let us each make certain that the services we provide are priced reasonably and are based on sound professional judgment as to medical necessity.

Finally, let us confront the Medicare Mousetrap with a clear conscience—and, if necessary, be prepared to roar like a lion! —S.H. □

## NEXT MONTH

In cooperation with the State Department of Health, the association's Committee on Immunization is co-sponsoring "Immunization Month" during March. The program features both public and professional education. As a part of this disease prevention promotion, the OSMA Committee has provided articles for a special issue on immunization—watch for the March issue of *The OSMA Journal*.





There has been such attention and focus on the problems of medicine in these turbulent times that it seems in order to pause for a word of encouragement and tribute to the beleaguered bulk and backbone of our society.

You are the conscientious, competent, compassionate and consistently overburdened private physician. You are the professional to whom the people turn, day, night, week-ends and holidays. You deal with critical illness, catastrophic injury, sniffles, splinters, anxieties and the gamut of human distress.

You respond to the poor, the rich, responsible, irresponsible, subsidized and the self-sufficient, the grateful and the ungrateful.

You have not *escalated* your fees and if your yearly income has increased at all in recent years, it is only because your days are longer and you are, *against* your advice, paid for services that you previously and cheerfully performed gratis.

You have difficulty keeping abreast of the rapid advances in knowledge and technology. You can't get away for meetings and are too weary by night for the journals, but you find some time for both somehow.

You are too pressed for time to make committee meetings and there are no spare hours for the important tasks in your society, hospital staff or the community in which you live, but you serve them all anyway.

You are dedicated to your profession and the people you serve. You are diligent in the preservation of the ideals of medicine.

You will not accept a forty-hour week for there is simply too much to be done!

Sincerely yours,

*Scott Henderson, M.D.*



# The Use of Bedside Hemodynamic Measurements in the Treatment of the Critically Ill

METHOD

HUBERT BELL, M.D.

*Simple techniques are available for cardiac output and C.V.P. measurements on all critically ill patients. This information is vital in saving lives of shock patients.*

**A** CRITICALLY ILL patient frequently presents a difficult diagnostic and therapeutic problem. He may be confused or semicomatose and unable to relate symptoms. Physical signs may be misleading or difficult to elicit, and occult hypovolemia or heart failure may be overlooked. In the presence of peripheral venous and arterial constriction, peripheral venous pressure determination may be in error and the blood pressure recorded by a standard sphygmomanometer may be grossly inaccurate.<sup>7</sup> Of even more importance, blood pressure recordings alone provide no clue to abnormal resistance-flow relationships that may be present.<sup>4</sup> We have been able to determine accurate intra-arterial blood pressure, cardiac output, peripheral resistance, and central venous pressure at the bedside by means of some simple diagnostic procedures.

All studies were done at the University of Kansas Medical Center. A Harvard withdrawal pump and Gilford densitometer and recording apparatus were placed on a small cart that easily could be maneuvered close to the patient's bedside. Accurate central venous pressure was measured by introducing a 36-inch radiopaque plastic catheter percutaneously into the left median cubital vein, advancing it to the junction of the superior vena cava and right atrium, and attaching the catheter to a manometer. A short plastic catheter was placed in the femoral artery by percutaneous technique and attached to a strain gauge, allowing accurate arterial pressure measurements. These catheters were left in place and the venous catheter was used to infuse intravenous fluids. The arterial catheter was kept patent by the use of a small flexible plastic stylet. Cardiac output (C.O.) was determined by the injection of a known quantity of indocyanine dye into the right atrium and recording a dye curve as blood from the arterial catheter was withdrawn through the densitometer. Peripheral resistance then was calculated by an application of Ohm's Law that Resistance =

$$\frac{\text{Pressure}}{\text{Cardiac Output}}.^4$$

Using this technique, the normal range of central venous pressure (C.V.P.) was 3 to 10 cm. of water, with upper limits of 15 cm. Normal peripheral resistance (T.P.R.) was 748 to 1945 dynes per second per cm.<sup>-5</sup> Normal cardiac index was 1.8 to 4.7 liters per minute/m<sup>2</sup>.<sup>6</sup>

#### DISCUSSION

The clinical signs of patients in shock are easily recognizable. The patient usually has a weak thready, rapid pulse and cold clammy extremities that may appear somewhat cyanotic. The patient may be confused or even comatose. He usually has a low urine output. His blood pressure frequently is recorded at a low level.<sup>7</sup> Much attention in the treatment of shock has been directed toward restoration of blood pressure to normal levels with vasopressors. The vasopressors which are used clinically are primarily alpha adrenergic stimulators that cause a rise in blood pressure by increasing arteriolar constriction and peripheral resistance. Since a patient also may be in shock with a normal blood pressure, very high peripheral resistance and low cardiac output, a proper definition of shock is failure to provide adequate peripheral perfusion.

The following case illustrates this principle (figure 1). A 67-year-old woman suffered an acute myocardial infarction. She

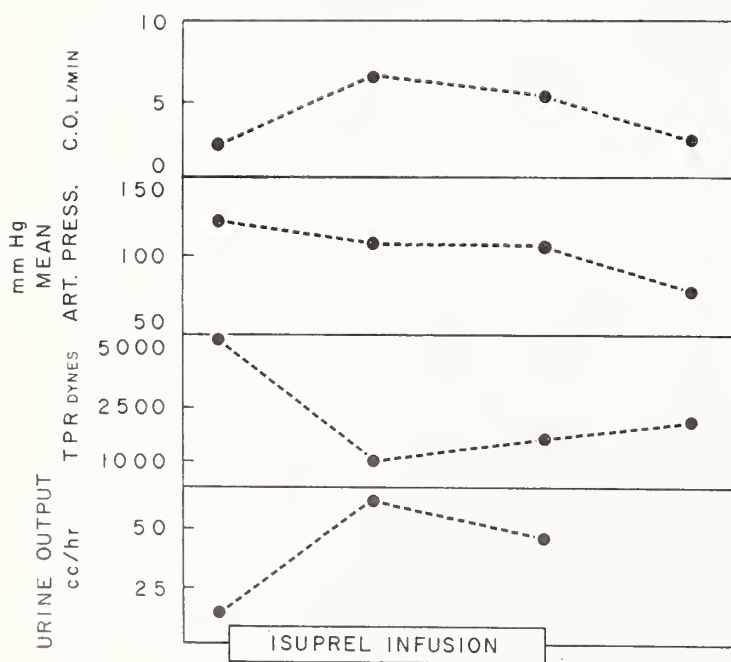


Figure 1. Isoproterenol therapy in acute myocardial infarction with normotensive shock.

was comatose, had a weak thready pulse and a very low urine output with cold, clammy extremities. She was in profound shock despite the fact that her blood pressure was recorded as 150/100 mm Hg. Hemodynamic studies revealed that she had a very low cardiac output of 1.8 l/min., a high peripheral resistance of 5,000 dynes and a normal central venous pressure. Since her peripheral resistance was already greatly elevated, it did not seem appropriate to treat her with a vasopressor drug that would further elevate peripheral resistance. Instead she was treated with a slow intravenous infusion of a beta adrenergic stimulating drug, isoproterenol. This caused a pronounced increase in her cardiac output, a lowering of her peripheral resistance and an increase in her urine output, despite the fact that her blood pressure fell.

A case of cardiogenic shock which presented a different clinical picture is shown in figure 2. Here a 70-year-old man with an acute myocardial infarction entered the emergency room without obtainable pulse or blood pressure. Hemodynamic studies revealed a low cardiac output of 1.5 l/min. and a high central venous pressure of 30 cm. of

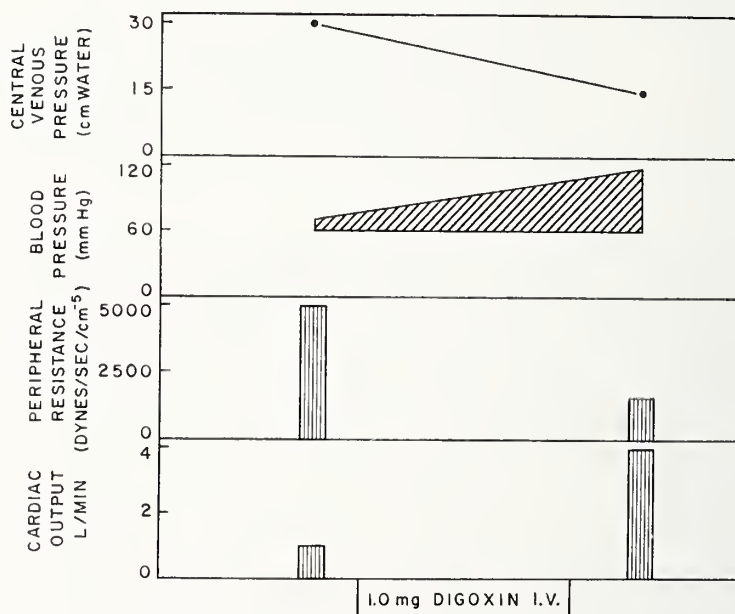


Figure 2. Digitalis therapy in cardiogenic shock.

Hubert Bell, M.D., graduated from the University of Kansas School of Medicine in 1962, where he is presently Assistant Professor of Internal Medicine. His medical affiliations include the Alpha Omega Alpha and the American Federation of Clinical Research.



water. There was dramatic improvement in blood pressure following rapid digitalization.

The presence of an elevated peripheral resistance and low cardiac output is a common occurrence in patients with myocardial infarction who are in shock. Treatment with alpha stimulating drugs including Aramine® and Levophed®, which have a mixed alpha and beta stimulating effect, frequently restore blood pressure to normal, but may do so by increasing peripheral resistance while cardiac output falls even further. In a recent study of 15 patients in shock following myocardial infarction, it was found that when the peripheral resistance was normal but the cardiac output was reduced, treatment with Levophed® or Aramine® regularly caused increased peripheral resistance and a further fall in the cardiac output.<sup>1</sup>

The most common cause of shock is hypovolemia.<sup>7</sup> This may be quite obvious as in a patient with a bleeding duodenal ulcer. It may also be clinically unrecognized as when it is a complicating feature in myocardial infarction, pancreatitis, barbiturate intoxication or gram negative septicemia. For example, a 27-year-old woman with an *E. Coli* septicemia from a ruptured uterus developed profound shock (figure 3). Her blood pressure on admission was 140/110 mm Hg., but then fell to 82/36 mm Hg. Treatment with intravenous metaraminal (Aramine®) resulted in a blood pressure rise but inadequate urine output. She was found to have a normal cardiac output of 6.5 l/min. with a low peripheral resistance. Because of a very low

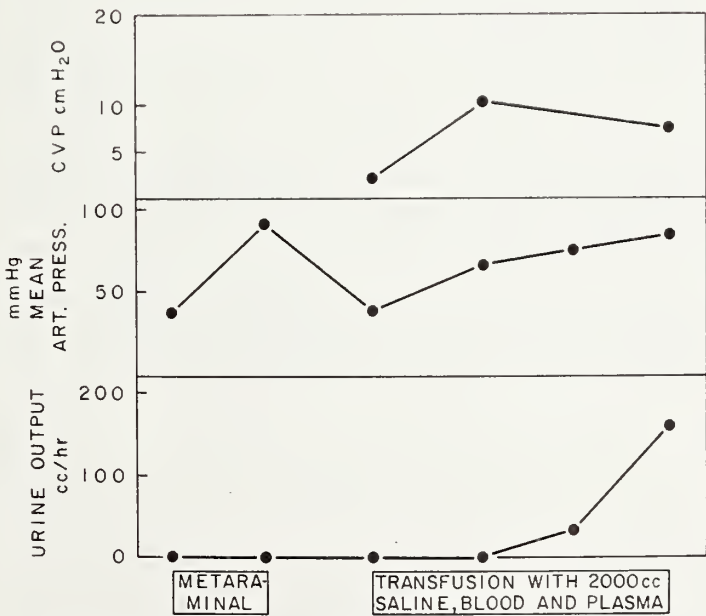


Figure 3. Fluid expansion therapy in gram negative shock.

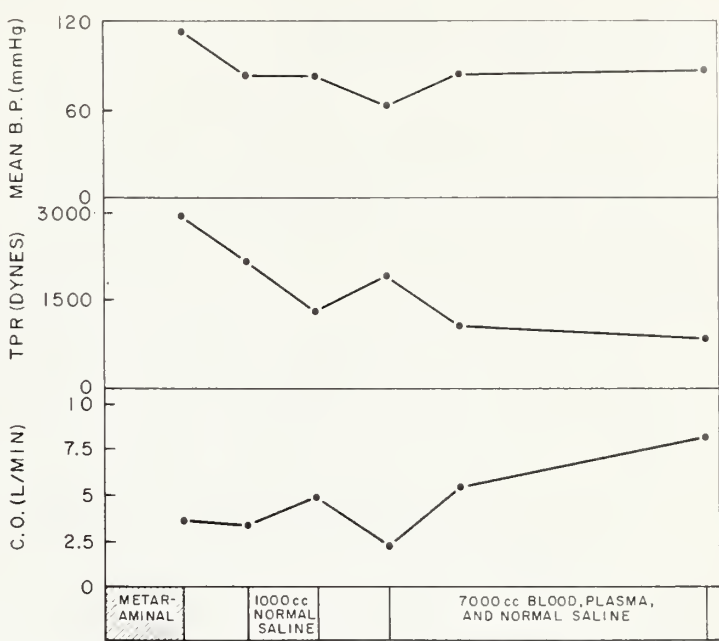


Figure 4. Fluid expansion therapy in postoperative patient not appearing dehydrated.

central venous pressure, hypovolemia was suspected as a complicating factor, and normal hemodynamics and urine output were restored following rapid infusion of 2,000 cc of blood and plasma.

Hypovolemia may occur without apparent cause and may easily be overlooked. A postoperative neurosurgical patient became extremely hypotensive following cardiac arrest and successful resuscitation (figure 4). Aramine® therapy maintained blood pressure by elevating peripheral resistance without increasing cardiac output. Although the patient did not appear dehydrated and had a normal  $I_{131}$  serum albumin blood volume, a low central venous pressure was observed. A complete reversal of his shock-like picture followed the rapid administration of 7,000 cc of blood, plasma, and saline.

Aramine® itself may be a source of hypovolemia. In the past it has been thought that the mechanism of Aramine® dependence was catecholamine depletion and that in order to wean someone from Aramine® it might be necessary to infuse norepinephrine. Botticelli has studied the effect of prolonged administration of Aramine® over several days in four patients. In these patients a state of apparent dependence on the drug developed with increasing drug requirements. He demonstrated that the dependence was actually due to hypovolemia secondary to increased transcapillary filtration of plasma and increased urinary loss.<sup>2</sup>

The following case illustrates Aramine®

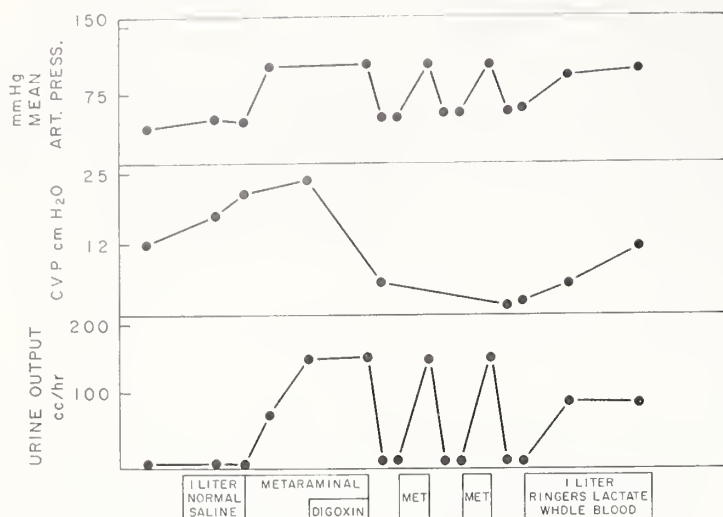


Figure 5. "Aramine dependence" corrected by fluid expansion.

dependence corrected by fluid expansion. A 20-year-old woman became hypotensive following a caesarean section (figure 5). The patient was febrile and hyperpneic, and sepsis was suspected as the cause of her shock-like picture. Because of a normal cardiac output of 6 l/min. and a low peripheral resistance she was treated during the first 24 hours with metaraminal infusion. The following day, however, she developed the clinical picture of "Aramine® dependence" with a pronounced fall in blood pressure and urine output each time Aramine® was discontinued. Accurate central venous pressure measurements demonstrated a very low pressure suggesting hypovolemia. Following the rapid infusion of 2,000 cc of Ringer's lactate solution and whole blood, the patient was successfully weaned from Aramine® without difficulty.

Similarly, in studying disorders of elevated blood pressure, it is important to determine flow-resistance relationships. The occurrence of hypertension after head trauma has been recognized clinically for many years. In 1902 Cushing reported his work in animal experiments where an increase in intracranial pressure produced a correspond-

ing increase in systemic blood pressure.<sup>3</sup> The etiology of the altered hemodynamics in these patients is thought to be medullary hypoxia or a distortion of the ponto-medullary portion of the brain stem from cerebral trauma.<sup>5</sup> The exact nature of these altered hemodynamics has been poorly understood.

We have studied three patients with head trauma who became hypertensive but have had normal peripheral resistance and extremely high cardiac output. Their cardiac outputs ranged between 14 and 18 liters per minute. One such case was a 40-year-old man who suffered a severe cerebral contusion in an automobile accident. He also had chest trauma and was in apparent respiratory distress. Initially his hypertension (200/110 mm Hg.), was found to be due to extremely high cardiac output of 18 liters per minute. The patient was hypoxic with a  $pO_2$  of 60 mm Hg. Restoration of proper oxygenation was effective in returning the cardiac output to a more physiological level. Chlorpromazine also was effective in reducing this high cardiac output, probably due to a central effect.

It is concluded that accurate bedside hemodynamic measurements can provide a useful adjunct to evaluation and management of critically ill patients. □

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# Management of Mass Casualties

JAY P. SANFORD, M.D.

*Are you prepared to triage?*

THE ADVENT OF nuclear weapons and their integration into current weapons systems by both the communistic and free societies makes the possibility of nuclear warfare a fact which cannot be ignored or wished away. Planning directed toward meeting the health-medical problems which would arise in the event of nuclear warfare requires an understanding of the types of nuclear weapons and the characteristics of the energy released.

There are two basic types of nuclear reactions or weapons. The fission type reaction or atomic bomb involves the bombardment of  $U^{235}$  or  $PU^{239}$  with a neutron under conditions which lead to a chain reaction releasing fission fragments, two neutrons and energy. The maximum energy yield from this type of weapons is approximately 100 kilotons (100 KT), a kiloton representing an energy yield equivalent to 1,000 tons of trinitroglycerin.

The second type is the fusion reaction or thermonuclear or hydrogen bomb. The basic

principle involves subjecting tritium and deuterium to high pressures and temperatures with resultant fusion to form helium and hydrogen with the release of energy. This reaction requires a fission reactor as a trigger mechanism. There is no upper limit of energy yields; yields in excess of 50 megatons (50 MT or 50,000,000 tons of TNT) have been achieved. The resultant energy produces blast, thermal and radiation effects, with approximately 50 per cent of the energy yield as blast, 35 per cent as thermal and 15 per cent as radiation.

Temperatures within the fireball at detonation approximate those of the sun, and its brightness exceeds that of the sun. As the fireball expands, the surrounding air is compressed with the development of pressures considerably in excess of atmospheric pressure. Then as the fireball begins to cool, the "shell" of compressed air breaks away and continues to move across the ground with resultant winds in excess of hurricane velocity and static pressure differentials in excess of those observed with tornadoes, which approximate three pounds per square inch (psi).

Casualties resulting from the blast effects are primarily related to the secondary and tertiary blast effects, *i.e.*, flying debris and translocation of persons rather than the result of the primary static or direct pressure effects on people.

This article was presented as a MEND lecture for the Emergency Medicine series at the University of Oklahoma Medical Center.

Thermal energy released encompasses the entire electromagnetic spectrum. Thermal effects have the greatest immediate casualty-producing potential, since under optimal circumstances significant thermal effects extend further from the point of detonation than the blast wave or initial radiation effects. However, thermal energy is readily absorbed and attenuated; hence, cloud cover or even high humidity would minimize thermal effects.

Radiation effects are divided into initial and delayed. Initial effects are over within one minute, at which time the fireball has reached altitudes in excess of the range of significant radiation. The delayed radiation effects are due to fallout. As cooling ensues, fallout results from the condensation of fission fragments and unfissioned debris with the vaporized earth which then falls back to the ground. Hence, significant fallout occurs only when the fireball was initially in contact with the earth's surface.

These energies have the potential for producing large numbers of casualties over large areas, *e.g.*, a 20 MT weapon detonated at an optimal height under ideal weather conditions would yield initial levels of radiation of 700 rad at a radius of 2.27 miles, 5 psi overpressure at 7.74 miles and second-degree burns ( $7.5 \text{ cal/cm}^2$ ) at 31.9 miles. The types of injuries which occur are not new to the medical profession; these would include mechanical injuries such as lacerations, fractures, contusions, burns and nuclear radiation.

In Hiroshima with a population of 255,000 the total casualties following the low air burst of a 15 to 20 KT range weapon were 136,000 (53 per cent). Of these, 45,000 died on the first day, leaving 91,000 injured casualties. To care for these casualties, there were 28 surviving physicians, 126 nurses and three hospitals.

Casualty estimates for Oklahoma City, assuming a weapon size which would produce the maximum number of surviving injured and uniform distribution of the population, would be 81,000 killed and 107,000 injured survivors. This yields the concept of "mass casualties." Mass casualties is defined as that number of casualties produced virtually

simultaneously which exceeds the capability of facilities and personnel to provide medical care in the usual manner. There is no set number; this is determined by the medical resources as well as the number of casualties. For example, the tornado which struck Belmond, Iowa, a community of 25,000, on October 14, 1966, produced 280 casualties. To meet this patient load, there were 23 physicians, 55 active nurses and 94 hospital beds in the county. Under these circumstances, 280 casualties might represent mass casualties, depending upon the type and severity of the injuries.

The problem in mass casualty care is not lack of medical knowledge but a disparity between the number of casualties and the availability of medical personnel and supplies.

There are a series of potential solutions which can minimize the problem. The most advantageous approaches are directed toward protection of the population with prevention of injury both in the general population and in health personnel. These approaches include knowledge of the warning signals and location of either designated or improvised shelters. Even a "fallout" type shelter will afford a greater likelihood of survival than exits for the unwarned or uninformed person in the open.

Each family should have at least one member trained in the essentials of first aid or medical self-help. In the early post-impact period, organized rescue or medical care will not be available. In most situations, life and limb saving measures will have to be performed by non-medical persons.

While these measures will reduce the cas-

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ualty load, large numbers of casualties can still be anticipated. Care for these will require expansion of available medical facilities through the use of emergency facilities such as the 200 bed Packaged Disaster Hospital and an increase in available health personnel. The latter aim can be achieved partially through expanded function training.

Expanded function training consists of up-dating the basic skills of all allied health workers as well as training groups to perform tasks under supervision which they ordinarily do not undertake in peacetime.

Finally, the keystone to utilization of such facilities and personnel lies in casualty sorting or triage. Triage is that procedure by which patients are classified according to the type and severity of injury to provide for the optimal achievement of medical care. Under peacetime circumstances, the goal of medical care is to provide life-saving measures to the maximum number of casualties. Patients whose prognosis is poor even with the availability of unlimited supplies and personnel cannot be given first priority. This would result in the loss of greater numbers of individuals with lesser but still life-threatening injuries.

Thus, patients whose lives may be saved by a procedure requiring 30 minutes or less, such as completion of an incomplete amputation, would receive immediate priority. Next, patients with minimum injuries would be selected out of the casualty load to minimize the chaos and avoid use of needed supplies on these individuals.

There would remain two groups, the delayed and the expectant. Patients in the delayed group require medical attention, but surgical procedures can be delayed for days without jeopardy of the patient's life. Such injuries include closed fractures of long bones. The expectant category would include casualties with poor prognosis under the best of circumstances; such patients would include those with extensive thoraco-abdominal injuries, etc. Patients in the latter category, who might make up 20 per cent of the total number of casualties, would not be ignored; they would be kept comfortable, their pain alleviated, and as the casualty load varied or their condition improved, they would be re-categorized.

Sorting is not a single irrevocable decision. It is a procedure which should be fluid and the patients should be re-evaluated frequently in light of the changing conditions. To many, the concept of sorting is abhorrent, since it demands that physicians make decisions contrary to medical training. Some feel it represents Civil War medicine or sub-optimal medical practice. The concept of sorting, however, represents optimal medical practice under suboptimal conditions. The achievement of any degree of success in such a program of disaster preparedness requires previous planning and training. In disaster, one has to know a great deal and know it well in order to accomplish even a little. □

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# Retinoblastoma

ROLAND A. WALTERS, M.D.\*  
DANIEL M. LANE, M.D.

*Early treatment of retinoblastoma markedly enhances the chance for survival in affected children. Physicians caring for children should check carefully for this rare tumor.*

THE RETINOBLASTOMA is a genetically determined, highly malignant tumor of infancy originating in the embryonic retinal neuroepithelium. Prior to the 20th Century, the disease was uniformly fatal but recent advances in therapy, coupled with early diagnosis, have achieved an 80 to 90 per cent cure rate in favorable lesions.<sup>9</sup> The characteristics of retinoblastoma and its therapy will be discussed.

## PATHOLOGY

Histologically, the retinoblastoma is composed of densely staining small, round cells arranged in clusters around a central blood vessel. These clusters are designated as pseudorosettes, to be distinguished from the true rosettes, characterized by radially arranged columnar cells with a central cavity but no blood vessel as found in neuroepitheliomas. The retinoblastoma is associated

with elevated excretion of urinary vanillyl-mandelic acid (VMA) and homovanillic acid (HVA), the metabolites of epinephrine and norepinephrine.<sup>2</sup> The measurement of urinary VMA can aid in the diagnosis of retinoblastoma, the evaluation of therapy, and the detection of metastases. Retinoblastoma is similar histologically to neuroblastoma which virtually never arises as a primary tumor of the orbit and is extra-global when it does occur.

## GENETICS

Retinoblastoma is a hereditary disorder, a fact unrecognized for many years after identification of the disease because there were no survivors. Since enucleation of the affected eye was instituted as therapy, more affected children have survived to bear children, the number of direct transmissions has increased, and the genetic nature of the disease has become apparent.

Retinoblastoma occurs most commonly as an autosomal dominant gene with a penetrance estimated at 80 per cent.<sup>14</sup> Thus, unilaterally involved individuals with a family history of retinoblastoma and bilaterally affected individuals, all of whom are assumed to have a hereditary basis, have a 50 per cent chance that their children will receive the genetic defect and a 40 per cent chance that their offspring will develop the tumor. In the absence of a positive family history the parents of an affected child have a six per cent chance of having another child with a tumor. Spontaneous somatic mutation does occur but is quite rare.

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\*Work was done on this paper when Doctor Walters was a fourth year medical student.



## CLINICAL FINDINGS

Retinoblastoma is by far the most common of retinal malignancies, occurring in one in 20,000 births.<sup>14</sup> Classically, two-thirds of the tumors are unilateral with over 80 per cent having multiple lesions in the affected eye at the time of diagnosis. They are highly malignant and spread by extension along the optic nerve into the subarachnoid space and infrequently through choroidal extension and hematogenous metastasis. Once the orbit is involved, lymphatic spread may occur. Although frequently only one eye is found to be involved initially, the second eye may become visibly involved several months later.

The disease usually presents in infancy or early childhood, the mean age of diagnosis being 13 months.<sup>10</sup> A common presenting sign is a peculiar yellowish or whitish reflex (leukocoria) in place of the normal pupillary reflex. Esotropia or exotropia may be present if the macula of one eye is involved rendering it sightless. On examination with penlight illumination a gray mass can usually be seen behind the lens. On ophthalmoscopic examination, the mass usually has the form of single or multiple yellowish-white nodules protruding from the retina into the vitreous humor. New vessels and occasionally hemorrhages may be visible on the surface of the tumor. Tonometry is of value in the diagnosis of secondary glaucoma which develops as the tumor increases in size within the globe. If the tension rises sufficiently,

there may be severe ocular pain and clouding of the cornea. Occasionally, X-ray examination of the eye will reveal areas of calcification within the tumor, a finding also characteristic of retinoblastoma.

Once the diagnosis is established, it is essential to evaluate the local extent of the tumor with sketching of the tumor foci under anesthesia. Likewise a rigorous search for metastases is imperative. This should be centered around a thorough physical examination with special emphasis on the central nervous system. Skull, skeletal, and chest roentgenograms along with spinal fluid examination, bone marrow examination, and serum alkaline phosphatase determination may aid in the detection of metastasis.

The definitive diagnosis may not be within the realm of the pediatrician or general physician since other abnormalities such as retinal detachment, primary vitreous hyperplasia, worm cyst, and retrolental fibroplasia can be mistaken for retinoblastoma. Therefore an ophthalmologist should be consulted at the earliest suspicion. The pediatrician and general physician should look closely at patients with a deviating eye or abnormal pupillary reflex and be aware that a tumor may be present. Early diagnosis is imperative since metastasis is frequent and significantly worsens the prognosis.

## TREATMENT

Retinoblastoma cases may be divided into five general types with regard to therapy: 1) unilateral, 2) bilateral, 3) residual tumor in the orbit at surgery, 4) recurrent tumor, and 5) extension to the brain and/or metastasis.<sup>10</sup>

1) UNILATERAL DISEASE: Most unilateral cases are far advanced within the globe when first discovered and enucleation with excision of a long portion of the optic nerve remains the treatment of choice. In the early unilateral lesion (usually discovered by eye examination in children with a family history of retinoblastoma, or when macular involvement has produced a squint) therapy may be directed at sight saving alternatives. Retinoblastomas are quite radio-sensitive, and supervoltage irradiation has been employed in unilateral disease with reported 82 per cent overall cure rate in a small

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series.<sup>1</sup> Supervoltage irradiation is replacing orthovoltage therapy since the former has more favorable depth characteristics, allows lower total dosage, and results in fewer complications. With all irradiation therapy, protection of the lens and ciliary body is essential to the preservation of vision. Other modalities occasionally employed in unilateral cases are photocoagulation,<sup>8</sup> radioactive scleral applicators,<sup>13</sup> and cryosurgery.<sup>7</sup> With all secondary therapies there is an increased risk and enucleation still remains the best method of dealing with a unilateral lesion. Regardless of therapy, all unilateral cases must be followed until school age for evidence of tumor in the other eye. Ophthalmoscopic examination under anesthesia is recommended at three month intervals for the first year and then every six months for the next five years.

2) **BILATERAL INVOLVEMENT:** In the extremely far advanced bilateral case where no vision can be salvaged in either eye, bilateral enucleation should be employed. Where one eye is far advanced and the other salvageable, the more severely involved eye is enucleated, and the other eye (if minimally involved) is treated with supervoltage irradiation.

In less favorable cases, those with a tumor focus anterior to the equator or a lesion larger than ten disc diameters in size,<sup>11</sup> the prognosis is worse and chemotherapy is added to X-ray. Triethylenemelamine (TEM), an alkylating agent and potent marrow depressant, is the most frequently employed agent in retinoblastoma chemotherapy.<sup>12</sup> Although it may be given orally or intravenously the best results have been obtained by intra-arterial perfusion through a carotid catheter.<sup>6</sup> This allows flow into the ophthalmic artery, and a high concentration of TEM reaches the central retinal vessels. Combined TEM and irradiation is felt to take advantage of an apparent synergistic activity. However, TEM is withheld in favorable cases due to its bone marrow suppressing side effect.

An ever increasing number of locally acting modalities are used for local retinal recurrences after irradiation and to destroy selected small tumors. Photocoagulation

with the Xenon arc lamp<sup>8</sup> is most frequently employed to eradicate small multiple tumors that may remain after radiation therapy and is particularly useful in lesions at the ora serrata, an exceedingly difficult area to irradiate without cataract production. Lesions near the optic nerve, or in the macula, are best treated by irradiation, since photocoagulation will produce a larger field defect.

A scleral applicator containing a radioactive isotope, usually Co<sup>60</sup>, has been employed in England in dealing with small single tumors.<sup>13</sup> Its only advantage is in a highly elevated tumor near the ora serrata which is too large for photocoagulation, and where the risk of cataract formation from irradiation is great.

The newest of the local modes of therapy is cryosurgery,<sup>7</sup> which consists of destroying tumor cells by means of a supercooled probe applied to the sclera over the tumor. The freezing temperature at the tip destroys the living cell by dehydration, ice crystal formation, denaturation of cell protein, and rupture of cell membranes. Initial work suggests that eye tumors of neural origin are particularly sensitive to freezing.<sup>7</sup>

3) **RESIDUAL TUMOR TISSUE LEFT IN THE ORBIT AT THE TIME OF ENUCLEATION:** When pathological examination indicates residual tumor, radiation to the affected area of optic nerve or orbital wall is indicated. Exenteration of the orbit has not been shown to increase survival. Insufficient data is available to assess the results of chemotherapy in this situation.

4) **RECURRENT TUMOR IN THE ORBIT:** This is apparently due to a residual focus which was not found at the time of pathological examination of the original enucleation. When residual tumor is found, the treatment is orbital exenteration followed by combination supervoltage radiation and ipsilateral intracarotid TEM.

5) **EXTENSION TO THE BRAIN AND/OR METASTASIS:** In these cases all efforts are essentially palliative. X-ray usually is beneficial in palliation of bone lesions. The combination of intravenous cyclophosphamide, actinomycin D, and methotrexate has also been used with some success in palliation.<sup>3</sup> The best response to chemotherapy under these circumstances is with alternat-



ing weekly administration of vincristine and cyclophosphamide.

#### COMMENTS

The achievement of maximal cure rates in retinoblastoma will require that physicians who care for children have an increased awareness of this rare, but frequently fatal tumor. He must watch closely children with a family history of retinoblastoma for the development of a retinal tumor. All children, under two years of age, should be carefully evaluated for the presence of a normal pupillary reflex and any abnormal finding should be aggressively pursued. Failure to pursue appropriate management in retinoblastoma can easily mean the difference between curing the patient and losing him to progressive malignant disease.

Particular emphasis should be placed upon unilateral lesions since they may represent a totally curable disease rather than an 80 per cent curable malignancy. Data from studies on the treatment of Wilm's tumor and other malignancies with a similar age distribution support the effectiveness of multiple modality treatment in increasing the cure rate in solid tumors in children.<sup>5</sup> Perhaps combination therapy using surgery, irradiation, and chemotherapy can result in 100 per cent survival in unilateral lesions since the tumor mass should be small enough to be eradicated completely with the use of all three modalities regardless of where the tumor has spread. It is obvious that no mat-

ter the extent of the disease, more aggressive therapy of retinoblastoma will be required to achieve better cure rates than those presently being obtained.

#### ACKNOWLEDGMENT

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# Abstracts

## BASIC PSYCHIATRY IN TWELVE HOURS: (An Experiment in Programmed Learning)

The authors relate their experience in preparing a self-instructional course in psychiatry which consisted of programmed definitions, an outline of basic psychiatry, and a program of statements on the outline. The average lay person could read through this once in three hours. It was found that in preparing this course the teacher had to focus and organize his thinking much more intensely than for the traditional teaching. The results were interesting. An underclassman college student, after 17 hours study with the program, could get a better grade on an examination than medical students having a minimum of 250 hours classroom psychiatry instruction. The examination questions were those used for the American Board of Psychiatry and Neurology candidates.

The authors then had 19 freshman college students use the self-instructional material over a six-week period and then take the Psychiatry National Board Examination. Although they were asked to study 35 hours, only one person did this. The average was 12.3 hours. The test included 15 points out of 100 dealing with questions for which they had no preparation, as neuropathology. The average grade obtained was 61.

The authors point out the position programmed courses will have in the near future. After studying the present psychiatry program, an unsophisticated student could grasp enough principles to perform respectably on a National Board Examination. These newer methods will help provide greater efficiency in learning and augment retention and utilization of knowledge. Rapid social changes and the knowledge explosion demand that medical schools experiment with newer and more efficient teaching techniques.

Basic Psychiatry in Twelve Hours: (An Experiment in Programmed Learning). Chester M. Pierce, M.D., James L. Mathis, M.D., and Vladimir Pishkin, Ph.D. *Dis. of the Nervous System*, 29: 533-535, 1968.

**Reviewer's Note:** The title, article, and points brought out by the authors are quite interesting and pertinent. Broader use of such programmed instruction would allow the student to proceed at his own pace and not be hindered by the mass pacing of the classroom. It would also free him from more clinical training and responsibility.—C. Bloedow, M.D.

## THE PATTERN OF LUNG DISEASE ASSOCIATED WITH ALPHA<sub>1</sub>-ANTITRYPSIN DEFICIENCY

Deficiency of  $\alpha_1$ -antitrypsin is the first serological biochemical defect to be associated with a high incidence of chronic obstructive lung disease in the adult.

The authors report on seven patients with such a deficiency. These patients represent three families. All demonstrated obstructive pulmonary disease, low carbon monoxide diffusing capacity, hypoxia and elevated alveolo-arterial  $PO_2$  gradients. Chest films and lung scans showed decreased vascularity in the lower lung fields, consistent with panacinar emphysema. No evidence of bullous emphysema was found.

Other reports suggest that the deficiency is inherited as an autosomal recessive trait. The Swedish investigators estimate that the deficiency may occur in 1:1,700 of the general population. Histological data is still limited. Two postmortem examinations showed panacinar emphysema. The mechanism of production of lung disease has not been established. Alpha<sub>1</sub>-antitrypsin inhibits enzymes in leukocytes. It has been hypothesized that absence of  $\alpha_1$ -antitrypsin permits autodigestion of pulmonary tissue by circulating or local proteolytic enzymes released from leukocytes.

The Pattern of Lung Disease Associated With Alpha<sub>1</sub>-Antitrypsin Deficiency. Guenter, C. A., Welch, M. H., Russell, T. R., Hyde, R. M., and Hammarsten, J. F. *Arch. of Int. Med.* 122: 254-257, 1968.

**Reviewer's Note:** An interesting report on research studies being done at the Medical Center to further characterize one of the first deficiency states found in emphysema.—C. Bloedow, M.D.

## RECENT PUBLICATIONS

The *Journal* welcomes the opportunity to list current publications by any Oklahoma physician.

Internal Urethrotomy and Recurrent Urinary Tract Infection in Female Children. I. Results in the Management of Infection. D. B. Halverstadt and G. W. Leadbetter, Jr. *Jr. of Urology*, 100: 297-302, 1968.

An Evaluation of Various Environmental Factors Affecting the Propagation of *Cryptococcus Neoformans*. C. M. Ishaq, G. S. Bulmer, and F. G. Felton. *Mycopath. Myc. Appl.* 35: 81-90, 1968.

*Cryptococcus Neoformans* III. Inhibition of phagocytosis. G. S. Bulmer and M. D. Sans. *J. Bacteriol.* 95: 5-8, 1968.

Pathogenesis of *Cryptococcosis*. G. S. Bulmer. *A.I.B.S. Abs.* Sept. 5, 1968, Columbus, Ohio.

Inhibition of Fibrinogen Reaction by Polysaccharide of Encapsulated *Staphylococcus Aureus*. R. Blackstock, R. M. Hyde, and F. C. Kelly. *J. Bacteriol.* 96: 799-803, 1968.

Comparison of *Staphylococcal Clumping Factor* and Protein. A. R. Blackstock and F. C. Kelly. *J. Bacteriol.* 96: 855-856, 1968. □



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Lomotil lowers the excessive intestinal propulsion characteristic of diarrhea. This reduction of precipitate intestinal flow allows a normal or more nearly normal reabsorption of fluid and electrolytes and counteracts the dehydration so hazardous to children.

Moreover, eight years' experience has demonstrated that Lomotil controls diarrhea with a minimum of unwanted secondary actions.

Senra del Valle and his associates<sup>1</sup> conducted a study of 477 children with diarrhea, most of whom were hospitalized with the disorder. Lomotil, used in 407 of the children, shortened the duration of the diarrhea.

Grinszpan, Goldstein and Divito<sup>2</sup> used Lomotil in 20 children with diarrhea and also reported a prompt disappearance of diarrhea. Harris and Beveridge<sup>3</sup> in a double-blind study of 50 children with diarrhea, however, found no clear pattern to suggest that Lomotil influenced the course of the condition.

Michener, Brown and Turnbull<sup>4</sup> added evidence supporting the beneficial effects of Lomotil in 80 children, concluding that Lomotil was highly useful in controlling abdominal cramping, diarrhea and hypermotility.

### Children: Total Daily Dosage

3-6 mo. . . . 1/2 tsp.\* t.i.d. (3 mg.)    ! ! !  
6-12 mo. . . . 1/2 tsp. q.i.d. (4 mg.)    ! ! ! !  
1-2 yr. . . . . 1/2 tsp. 5 times daily (5 mg.)    ! ! ! ! !  
2-5 yr. . . . . 1 tsp. t.i.d. (6 mg.)    ! ! !  
5-8 yr. . . . . 1 tsp. q.i.d. (8 mg.)    ! ! ! !  
8-12 yr. . . . 1 tsp. 5 times daily (10 mg.)    ! ! ! ! !  
Adults: . . . . 2 tsp. 5 times daily (20 mg.)    ! ! ! ! !  
                    or 2 tablets q.i.d.    ee ee ee ee

\*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

### References:

1. Senra del Valle, A.; Linfante de Rufinelli, E. B.; Brumetti, E., and Rossi, R. H.: El clorhidrato de difenoxilato en las diarreas infantiles, *Sem. Med. (Buenos Aires)* 127:475-484 (Oct. 4) 1965. 2. Grinszpan, I. L.; Goldstein, A., and Divito, J.: El clorhidrato de difenoxilato en las diarreas infantiles, *Sem. Med. (Buenos Aires)* 125:758-763 (Aug. 27) 1964. 3. Harris, M. J., and Beveridge, J.: Diphenoxylate in the Treatment of Acute Gastro-Enteritis in Children, *Med. J. Australia* 2:921-922 (Nov. 27) 1965. 4. Michener, W. M.; Brown, C. H., and Turnbull, R. B., Jr.: Ulcerative Colitis in Children. II. Medical and Surgical Therapy, *Amer. J. Dis. Child.* 108:236-242 (Sept.) 1964.

**SEARLE**

*Research in the Service of Medicine*





THE BETTMAN ARCHIVE

**Just one tablet at bedtime • Prevents painful night leg cramps • Permits restful sleep**

How many of your patients stamp their feet at night and lose sleep because of painful leg cramps? Unless prompted, they usually fail to report this distressing condition and suffer needlessly.

One tablet of QUINAMM at bedtime usually controls distressing night cramps and permits restful sleep with the initial dose.

**Prescribing information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Side Effects/Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.



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## 1969 OSMA Annual Meeting

### Guest Speakers

#### TUSLA ASSEMBLY CENTER

**THURSDAY, MAY 15th**

- 1:30 p.m. **PEDIATRICS**—Thomas K. Oliver, Jr., M.D., Professor of Pediatrics, University of Washington School of Medicine, Seattle, Washington.
- 1:30 p.m. **PATHOLOGY**—L. W. Diggs, M.D., Professor of Medicine and Hematology, University of Tennessee School of Medicine, Memphis, Tennessee.
- 1:30 p.m. **ORTHOPEDICS**—Edward L. Compere, M.D., Chairman, Department of Orthopedic Surgery, Wesley Memorial Hospital, Chicago, Illinois.

**FRIDAY, MAY 16th**

- 9:00 a.m. **INTERNAL MEDICINE** — John A. Pierce, M.D., Associate Professor of Medicine, Washington University School of Medicine, St. Louis, Missouri.
- 9:00 a.m. **OBSTETRICS AND GYNECOLOGY**—James R. Freedman, M.D., Houston, Texas.
- 9:00 a.m. **UROLOGY**—Clair E. Cox, M.D., Associate Professor of Urology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, North Carolina.
- 1:30 p.m. **ELECTRONIC SEMINAR ON TRAUMA**—William F. Meacham, M.D., Professor of Neurological Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee.

**SATURDAY, MAY 17th**

- 9:00 a.m. **OPHTHALMOLOGY - OTOLARYNGOLOGY**—Crowell Beard, M.D., Associate Clinical Professor of Ophthalmology, University of California School of Medicine, San Jose, California.
- 9:00 a.m. **RADIOLOGY**—James J. McCort, M.D., Associate Clinical Professor of Radiology, Stanford University Medical School, San Jose, California.
- 9:00 a.m. **GENERAL SURGERY**—Allen P. Thal, M.D., Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kansas.
- 1:30 p.m. **ANESTHESIOLOGY**—William S. Howland, M.D., Chief, Anesthesiology Department, Memorial Hospital for Cancer and Allied Diseases, New York, New York, and A. H. Giesecke, Jr., M.D., Associate Professor of Anesthesiology, University of Texas Southwestern Medical School, Dallas, Texas.
- 1:30 p.m. **DERMATOLOGY**—Robert W. Goltz, M.D., Chairman, Department of Dermatology, University of Colorado School of Medicine, Denver, Colorado.

Sections on Psychiatry and General Practice will be scheduled later.



# Books As Clinical Tools

## YOUR WORKING LIBRARY

KELLY M. WEST, M.D., and  
PATRICIA SMITH,\* M.L.S.

From time to time this column has presented lists of those volumes which are most frequently useful to the practicing physician in his day-to-day decision making. Since the time available to a physician is quite limited, it is crucial that he have *immediately* available certain key references. Excellent review articles are available in medical journals concerning new books, but this information is scattered widely, and the physician may find it difficult to evaluate the advertising of the publishers.

We therefore offer the list below to assist physicians in choosing books for their own collections or for their clinic or hospital libraries. Similar lists have been compiled by others; for example, by Brandon, who is director of the medical library at Johns Hopkins University. These lists, however, are usually not compiled specifically and exclusively for clinicians, and they tend to become obsolete rapidly.

The books on this list have the following characteristics: they are all quite recent; they provide well-indexed material from which the reader can usually extract information promptly; they are, for the most part, the "consensus picks" in their field with respect to the information provided and clarity of presentation. In some fields, equally good books are not listed. Many excellent books are not mentioned either because they concern a relatively narrow subject, (such as Sherlock's book on the liver), or because they are too large and expensive for the personal library of a physician who is not a specialist in the field covered by the book (such as the three volume set of Campbell [\$90] on Urology). Books on the basic sciences are for the most part omitted from this list of clinical references, although a few are included because they have frequent usefulness in clinical practice. The volume of Goodman and Gilman is an example of such

a book. One of the main purposes of a collection of this kind would be to provide information for the specialist in fields outside his specialty or subspecialty. The specialist would, of course, need additional volumes to cover his own field in greater depth. We welcome suggestions concerning additions or replacements for this list.

The general practitioner and those with broad specialties such as Internal Medicine should probably own about half of these books, if they are not immediately available in a hospital library. Probably all of these books ought to be available in a nearby hospital library. Assuming that a physician decided to acquire half of these books, an initial investment of about \$500 would be required, but subsequently only about \$100 per year would be needed to keep the collection current. Since this is a tax-deductible expense, the investment is extremely modest in relation to its potential benefits.

We urge you to consider the potentialities of having this information *immediately* at hand in making available to your patients the best in medical practice. We also believe that scholarship relating directly to patient care is the best and most efficient mechanism for continuing education.

## REFERENCES FOR THE PRACTITIONER'S OFFICE

### ALLERGY AND IMMUNOLOGY

Samter, Max, ed. *Immunological Diseases*. Boston: Little, Brown, 1965. \$30.00.

Sheldon, John McFarland, et al. *A Manual of Clinical Allergy*. 2d ed. Philadelphia: Saunders, 1967. \$15.00.

### ANATOMY

One of the following:

Grant, John C. B. *An Atlas of Anatomy*. 5th ed. Baltimore: Williams & Wilkins, 1962. \$19.95.

Gray, Henry. *Anatomy of the Human Body*. 28th ed. Edited by Charles M. Goss. Philadelphia: Lea & Febiger, 1966. \$22.50.

### ANESTHESIA

One of the following:

Collins, Vincent J. *Principles of Anesthesiology*. Philadelphia: Lea & Febiger, 1966. \$35.00.

Wylie, William Derek, and Churchill-Davidson, H. C. *A Practice of Anaesthesia*. 2d ed. Chicago: Year Book, 1966. \$28.50.

### ARTHRITIS

Hollander, Joseph Lee, ed. *Arthritis and Allied Conditions; a Textbook of Rheumatology*. 7th ed. Philadelphia: Lea & Febiger, 1966. \$32.50.

### CANCER

Ackerman, Lauren Vedder, and Del Regato, J. A.

\*Coordinator, Library and Information Activities, Oklahoma Regional Medical Program.

One of a series sponsored by the Department of Continuing Education, University of Oklahoma Medical Center.



## books

*Cancer: Diagnosis, Treatment, and Prognosis.* 3d ed. St. Louis: Mosby, 1962. \$29.50.

Nealon, Thomas Francis, ed. *Management of the Patient with Cancer.* Philadelphia: Saunders, 1965. \$27.50.

### CARDIOLOGY

Allen, Edgar Van Nuys, et al. *Peripheral Vascular Diseases.* 3d ed. Philadelphia: Saunders, 1962. \$18.00.

One of the following:

Friedberg, Charles Kaye. *Diseases of the Heart.* 3d ed. Philadelphia: Saunders, 1966. 1 vol. ed., \$22.00; 2 vol. ed., \$26.00.

Hurst, John Willis, ed. *The Heart: Arteries and Veins.* New York: Blakiston, 1966. \$25.00.

Stephenson, Hugh E. *Cardiac Arrest and Resuscitation.* 2d ed. St. Louis: Mosby, 1964. \$15.00.

### DERMATOLOGY

Andrews, George Clinton, and Domonkos, Anthony N. *Diseases of the Skin.* 5th ed. Philadelphia: Saunders, 1963. \$16.50.

### DIAGNOSIS

MacBryde, Cyril Mitchell, ed. *Signs and Symptoms: Applied Pathologic Physiology and Clinical Interpretation.* 4th ed. Philadelphia: Lippincott, 1964. \$14.00.

**EMERGENCIES** (for poisoning see Pharmacology and Therapeutics)

Bailey, Hamilton. *Emergency Surgery.* 8th ed. Edited by T. J. McNair. Baltimore: Williams & Wilkins, 1967. \$32.00.

Eckert, Charles. *Emergency Room Care.* Boston: Little, Brown, 1967. \$11.50.

### ENDOCRINOLOGY

Williams, Robert Hardin, ed. *Textbook of Endocrinology.* 4th ed. Philadelphia: Saunders, 1968. \$24.00.

### FLUID AND ELECTROLYTES

Black, Douglas A. K. *Essentials of Fluid Balance.* 3d ed. Oxford: Blackwell, 1964. \$5.00.

### GASTROENTEROLOGY

One of the following:

Bockus, Henry Le Roy, et al. *Gastroenterology.* 2d ed. Philadelphia: Saunders, 1963-65. 3 vols. \$83.00.

Jones, Francis Avery, et al. *Clinical Gastroenterology.* 2d ed. Philadelphia: Davis, 1968. \$21.50.

### GYNECOLOGY AND OBSTETRICS

One of the following:

Novak, Edmund R., et al. *Textbook of Gynecology.* 7th ed. Baltimore: Williams & Wilkins, 1965. \$16.00.

Parsons, Langdon, and Sommers, Sheldon C. *Gynecology.* Philadelphia: Saunders, 1962. \$20.00.

Williams, John Whitridge. *Obstetrics.* 13th ed. by Nicholson J. Eastman and Louis M. Helman. New York: Appleton, 1966. \$18.75.

### HEMATOLOGY

Wintrobe, Maxwell Myer. *Clinical Hematology.* 6th ed. Philadelphia: Lea & Febiger, 1967. \$22.50.

### INFECTIOUS DISEASE

Davis, Bernard D., et al. *Microbiology.* New York: Hoeber, 1967. \$23.50.

Top, Franklin Henry. *Communicable and Infectious Diseases; Diagnosis, Prevention, Treatment.* 6th ed. St. Louis: Mosby, 1968. \$28.50.

### INTERNAL MEDICINE

Cecil, Russell LaFayette, and Loeb, Robert F., ed.

*Cecil-Loeb Textbook of Medicine.* 12th ed. by Paul B. Beeson and Walsh McDermott. Philadelphia: Saunders, 1967. 2 vols. \$24.50.

Harrison, Tinsley Randolph, et al. *Principles of Internal Medicine.* 5th ed. New York: Blakiston, 1966. 1 vol. ed., \$22.50; 2 vol. ed., \$29.50.

### KIDNEY DISEASE

Black, Douglas A. K. *Renal Disease.* 2d ed. Philadelphia: Davis, 1967. \$25.00.

### LABORATORY METHODS

One of the following:

Davidsohn, Israel, and Wells, Benjamin B., ed. *Todd-Sanford Clinical Diagnosis by Laboratory Methods.* 13th ed. Philadelphia: Saunders, 1962. \$16.50. (14th ed. forthcoming, 1969.)

Page, Lot B., and Culver, Perry J. *A Syllabus of Laboratory Examinations in Clinical Diagnosis.* Cambridge, Mass., Harvard University Press, 1960. \$12.50.

### NEUROLOGY

Merritt, Hiram Houston. *A Textbook of Neurology.* 4th ed. Philadelphia: Lea & Febiger, 1967. \$12.50.

### OPHTHALMOLOGY

One of the following:

Adler, Francis Heed. *Textbook of Ophthalmology.* 7th ed. Philadelphia: Saunders, 1962. \$9.00.

May, Charles Henry. *Manual of Diseases of the Eye.* 24th ed. by James H. Allen. Baltimore: Williams & Wilkins, 1968. \$9.75.

### ORTHOPEDIC AND FRACTURE SURGERY

Shands, Alfred Rives, et al. *Handbook of Orthopaedic Surgery.* 7th ed. St. Louis: Mosby, 1967. \$12.50.

### OTORHINOLARYNGOLOGY

Boies, Lawrence R., et al. *Fundamentals of Otolaryngology: a Textbook of Ear, Nose and Throat Diseases.* 4th ed. Philadelphia: Saunders, 1964. \$8.50.

### PATHOLOGY

One of the following:

Anderson, William Arnold Douglas. *Pathology.* 5th ed. St. Louis: Mosby, 1966. 2 vols. \$21.00.

Miller, Seward Elmore, ed. *A Textbook of Clinical Pathology.* 7th ed. Baltimore: Williams & Wilkins, 1966. \$17.00.

Robins, Stanley L. *Pathology.* 3d ed. Philadelphia: Saunders, 1967. \$25.00.

### PEDIATRICS

Barnett, H. L. *Pediatrics.* 14th ed. New York: Appleton, 1968. \$25.50.

Nelson, Waldo E., ed. *Textbook of Pediatrics.* 8th ed. Philadelphia: Saunders, 1964. \$18.00.

Shirkey, Harry C., ed. *Pediatric Therapy.* 3d ed. St. Louis: Mosby, 1968. \$25.00.

### PHARMACOLOGY AND THERAPEUTICS

American Medical Association. Council on Drugs. *New Drugs.* Chicago: 1967. \$3.50.

*Current Therapy.* Edited by Howard F. Conn. Philadelphia: Saunders, 1968. \$13.00.

Goodman, Louis Sanford, and Gilman, Alfred. *The Pharmacological Basis of Therapeutics.* 3d ed. New York: Macmillan, 1965. \$22.50.

Modell, Walter, ed. *Drugs of Choice.* St. Louis: Mosby, 1967. \$17.20.

*Physicians Desk Reference to Pharmaceutical Specialties and Biologicals.* Oradell, New Jersey: Medical Economics, 1, 1947-. Annual. \$10.00.

One of the following:

Bensley, Edward Horton, and Joron, G. E. *Handbook*



of *Treatment of Acute Poisoning*. 3d ed. Baltimore: Williams & Wilkins, 1963. \$4.00.

Moeschlin, Sven. *Poisoning; Diagnosis and Treatment*. New York: Grune & Stratton, 1965. \$29.75.

#### PREVENTIVE MEDICINE AND PUBLIC HEALTH

Leavell, Hugh Rodman, et al. *Preventive Medicine for the Doctor in his Community; an Epidemiologic Approach*. 3d ed. New York: Blakiston, 1965. \$12.50.

#### PSYCHIATRY

One of the following:

Freedman, Alfred M., and Kaplin, H. I. *Comprehensive Textbook of Psychiatry*. Baltimore: Williams & Wilkins, 1967. \$24.75.

Noyes, Arthur Percy, and Kolb, L. C. *Modern Clinical Psychiatry*. 7th ed. Philadelphia: Saunders, 1968. \$9.00.

#### PULMONARY DISEASE

Baum, Gerald L., ed. *A Textbook of Pulmonary Diseases*. Boston: Little, Brown, 1965. \$27.50.

#### RADIOLOGY

Meschan, Isadore. *Roentgen Signs in Clinical Practice*. Philadelphia: Saunders, 1966. 2 vols. \$38.00.

#### REHABILITATION

One of the following:

Rusk, Howard A. *Rehabilitation Medicine; a Textbook on Physical Medicine and Rehabilitation*. 2d ed. St. Louis: Mosby, 1964. \$15.50.

Licht, Sidney. *Rehabilitation and Medicine*. New Haven: Licht, 1968. \$18.00.

#### SURGERY

One of the following:

Christopher, Frederick, ed. *Textbook of Surgery*. 9th

ed. by Loyal Davis. Philadelphia: Saunders, 1968. \$21.50.

Moyer, Carl A., et al. *Surgery, Principles and Practice*. 3d ed. Philadelphia: Lippincott, 1965. \$19.00.

See also Bailey, Hamilton under **EMERGENCIES**.

#### UROLOGY

Colby, Fletcher H. *Essential Urology*. 4th ed. Baltimore: Williams & Wilkins, 1961. \$8.00.

### REFERENCE VOLUMES

#### INDEXES AND BIBLIOGRAPHIES\*

*Cumulated Index Medicus*. Bethesda, Maryland: U.S. National Library of Medicine. Annual. \$40.00. (Having the volumes from the one or two most recent years is usually helpful if a medical library is not immediately accessible.) May be ordered from Superintendent of Documents, Washington, D.C.

*Current Medical References*. 5th ed. Edited by Milton J. Chatton and Paul J. Sanazaro. Los Altos, California: Lange, 1967. \$10.00.

*Instadex*. Chico, Calif. 1, 1968. Winward Press.

#### HANDBOOKS

Cooper, Philip. *Ward Procedures and Techniques*. New York: Appleton, 1967. \$6.75.

Merck and Company. *Merck Manual of Diagnosis and Therapy*. 11th ed. Rahway, New Jersey: 1966. \$9.50.

\*The nature and clinical uses of these have been described previously (Using Literature Indexes in Clinical Practice. *Journal O.S.M.A.*, 59: 28-29, 1966).

## 1969 POSTGRADUATE COURSES

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March 3rd-7th—Advanced Electrocardiography

\*March 6th—Dermatology in Practice

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March 20th-21st—Spring Symposia in Ophthalmology and Otolaryngology

April 10th—Pediatric Postgraduate Seminar

April 14th-18th—Clinical Anesthesia: A Review Course in Practical and Safe Methods

\*April 24th—Radiology of Acute Disease in Adults and Children

\*May 14th—Advances in Neurology and Neurosurgery

May 23rd—Annual Meeting—Association of House Staff Physicians

\*Afternoon short courses—four hours of instruction

**For further information, write to the Office of Postgraduate Education, University of Oklahoma Medical Center, 800 N.E. 13th Street, Oklahoma City 73104**

## Tumor Board Proceedings\*

Edited by  
RICHARD H. BOTTOMLEY, M.D.\*\*

### CASE NO. 5: Reticulum Cell Sarcoma

**PRESENTATION:** The patient is a 69-year-old Negro female, who presents with a history of a rapidly enlarging tumor in the right side of her neck. It appeared as a small mass on the right that has increased in size without any history of tenderness or pain. She also developed a mass in the left side of her neck which has also been asymptomatic. Two days prior to admission she developed hoarseness, and she was found to have a mass extending from the right mandibular and submandibular areas across the mid-line to the left. This mass is pushing the trachea to the left. She also has multiple, matted nodes in the right supraclavicular area, the right posterior triangle area, and multiple nodes in the left side of the neck. The mass is palpable in the floor of the mouth, palpable on the right lateral pharyngeal wall and seemed to bulge into the right hypopharyngeal wall. Examination of her larynx is essentially unremarkable except for the right hypopharynx. There are two palpable nodes in the right axilla. There are small palpable nodes in the left axilla, but there are no inguinal nodes. She also has an 8 x 10 centimeter mass palpable in the epigastrium. A biopsy of the cervical mass was reported as reticulum cell sarcoma. An x-ray of the

chest was reported as negative for metastatic lesions.

**\*DOCTOR CONDIT:** I assume that surgery has no place in the management of this patient. Doctor Bogardus, what about radiation therapy?

**\*\*DOCTOR BOGARDUS:** Radiation therapy can and should be used at least as the initial form of treatment for this tumor. Reticulum cell sarcoma responds well to radiation therapy, and I'm sure we'll get a good regression of her nodes. We may even be able to treat successfully the mandibular involvement. In any event we can reduce the size of the tumor and at least give her some degree of palliation. Reticulum cell sarcoma is curable if it's localized. I suspect hers is not localized, therefore, it's probably not curable. But I think radiation therapy should be used as the primary form of treatment. Once it becomes a generalized disease, it's out of our control. Then, I think chemotherapy should be used to manage it, but not before then.

**DOCTOR CONDIT:** Where would you place your fields in this situation?

**DOCTOR BOGARDUS:** Well, she obviously has tumor in the right side of her neck and in the mediastinum. I would treat all the upper lymphatic chains. Depending upon what diagnosis we come up with on the abdominal mass, we may or may not treat it.

**DOCTOR CONDIT:** Would you do a lymph

\*The University of Oklahoma Medical Center Tumor Board meets weekly in the Goddard Auditorium of the Oklahoma Medical Research Foundation and is made up of members of the Departments of Radiotherapy, Surgery, Medicine, Pathology, Dermatology, Oral Surgery, and Otorhinolaryngology from the University Hospital, Veterans Administration Hospital and Oklahoma Medical Research Foundation.

\*\*Assistant Head Cancer Section, Oklahoma Medical Research Foundation, Assistant Professor of Research Medicine, and Associate Professor Research Biochemistry, University of Oklahoma School of Medicine—825 N.E. 13th, Oklahoma City, Oklahoma 73104.

\*Doctor Paul T. Condit—Head, Cancer Section, Oklahoma Medical Research Foundation, Associate Professor of Research Medicine, and of Radiology (Oncology) and Professor of Biochemistry, University of Oklahoma School of Medicine.

\*\*Doctor Carl R. Bogardus Jr.—Associate Professor of Radiology, Director, Division of Radiation Therapy of University of Oklahoma School of Medicine.



phangiogram?

DOCTOR BOGARDUS: A lymphangiogram would be of benefit. I would wait until we were almost finished with the treatment of the upper mantle before we do it. This would give nodes in the lower abdomen a chance to become more obvious.

DOCTOR CONDIT: This tumor seems to be growing very rapidly.

DOCTOR BOGARDUS: If it's moving that rapidly it may very well be that her abdominal involvement will show up much more prominently than we anticipate.

DOCTOR CONDIT: This brings up the other question that Doctor Bottomley is getting ready to comment on; whether she should have chemotherapy first to get this under control. Doctor Bottomley?

\*\*\*DOCTOR BOTTOMLEY: This is one of the tumors that has been very responsive to Vincristine (Oncovin). The last patient with reticulum cell sarcoma that we treated went approximately six months with no evidence of the disease with continued maintenance therapy. The problem that you run into is that these lesions appear so fast that if you don't use some type of systemic treatment, either with or instead of the radiation therapy, you are forced to chase it around. This may be one of the tumors that eventually has a chance of being cured by chemotherapy. We really haven't seen enough of them to have extensive experience with chemotherapy. They are however, very sensitive, and react much like the Burkitt's lymphoma in Africa. With the administration of Vincristine, they completely melt away, and about 80 or 90 per cent of them will respond.

DOCTOR CONDIT: Doctor Bogardus, how fast could you treat this woman?

DOCTOR BOGARDUS: We could treat it pretty rapidly.

DOCTOR CONDIT: You have the problem of covering a pretty large area.

DOCTOR BOGARDUS: We'll be covering a very large area. We will cover the whole lymphatic mantle, and it will take us about four weeks to treat it.

DOCTOR CONDIT: So, you don't feel that

this is growing so fast that it will get ahead of you during the time that you treat it. Is that correct?

DOCTOR BOGARDUS: I don't know, Doctor Condit; let's try it and see, for now . . .

DOCTOR BOTTOMLEY: This particular form of reticulum cell sarcoma is very rapidly progressive. The first patient we ever treated with Vincristine was completely bed-ridden, had multiple holes in his bones and within a week, he was out of bed.

\*\*\*\*DOCTOR SNOW: There are two effective forms of treatment for this disease. It develops very rapidly and is rapidly fatal. When one sees a patient that presents as this patient did with only a two month history of enormous mass development, one has an emergency on his hands. Attention should be called to the proper way in which this patient has been managed. She presented here four days ago. She had a biopsy performed three days ago and treatment will begin tomorrow. If you procrastinate in the work-up of such a patient, you are likely not to have a patient to treat at the end of the work-up. It's important to establish the diagnosis of lymphoma very promptly.

DOCTOR CONDIT: All I was suggesting was that radiation therapy be preceded by one or two doses of Vincristine to put the lid on, and to give you a chance to get an adequate dose of radiation to every site.

DOCTOR BOGARDUS: It makes no difference, Doctor Condit. It will respond beautifully to either form of treatment. I do not think we're dealing with a curable situation in her case, but I would be glad to go along with you either way on this. I still think radiation therapy should be used, though, to start her treatment.

DOCTOR BOTTOMLEY: The question in this patient is, basically, 'what is the best palliative treatment for disseminated reticulum cell sarcoma?' With the drugs now available, of which the vinca alkaloid, Vincristine and the alkylating agent, Cytosan (Cyclophosphamide) are the most effective, you can control many of these patients for months. My own feeling is that in this type of patient the best treatment is systemic chemotherapy, initially with Vincristine in a dose of 0.05

\*\*\*Doctor Richard H. Bottomley—Assistant Head, Cancer Section, Oklahoma Medical Research Foundation, Assistant Professor of Research Medicine and Associate Professor of Research Biochemistry, University of Oklahoma School of Medicine.

\*\*\*\*Doctor James B. Snow, Jr.—Professor and Head of Department of Otorhinolaryngology, University of Oklahoma School of Medicine.



mg/Kg I.V. weekly for four to six doses and then maintenance of the remission with Cytosan at a dose of one to three mg/Kg orally daily. The toxicity of Vincristine is primarily related to its neurotoxicity which is manifested as a loss of deep tendon reflexes, paresthesias, peripheral neuropathy and severe constipation. These manifestations sometimes require that the medication be discontinued before the course is completed. The toxicity of Cytosan is primarily on the bone marrow and is manifested by a decrease in the white blood count and platelets. These must be checked at frequent intervals and the dose of the drug adjusted accordingly. With this regimen, radiation therapy can be given to any local area which does not show adequate control without the necessity of treating multiple areas at the same time.

**FINAL DIAGNOSIS:** Disseminated Reticulum Cell Sarcoma.

**TUMOR BOARD RECOMMENDATION:**

1) Chemotherapy with Vincristine (Oncovin) at a dose of 0.05 mg/Kg I.V. weekly for four to six doses to be followed by maintenance with Cytosan at a dose of one to three mg/Kg orally daily. Radiation therapy to be given to areas not responding to the drugs. An alternate proposal was radiation therapy to the large neck mass followed by systemic chemotherapy.

**CASE NO. 6: Adenocarcinoma of the Breast**

**PRESENTATION:** The patient is a 70-year-old Negro female, who has apparently been in excellent health all of her life. About three months ago she noticed a mass in her right breast which she says was the size of her fist. She let this go and a month ago she noticed an ulceration in the lateral aspect of the right breast which began to cause some discomfort and pain. About three days before her admission, she contacted her doctor in Hugo, Oklahoma, and was referred here. This is the extent of her history. Abnormal physical findings are limited mainly to the right breast. On inspection she has the characteristic orange peel skin, and about a two- to three-centimeter ulceration on the lateral aspect of the right breast. The nipple is retracted somewhat downward and laterally. There is a large, firm mass ranging from about eight to ten centimeters in diameter,

which is fixed to the pectoral muscles. She has four or five axillary nodes that are palpable, measuring about one to one and one-half centimeters in diameter. She has no palpable supraclavicular nodes, and the opposite breast is free of any masses. The rest of her physical findings are within normal limits, except for the fact that she has bilateral cataracts. A needle biopsy of the breast mass was reported as poorly differentiated adenocarcinoma. The chest film and metastatic survey were negative.

**DOCTOR BOGARDUS:** Doctor Williams, how would you manage a problem such as this?

\*\*\*\*\***DOCTOR WILLIAMS:** Categorically this is an inoperable tumor.

**DOCTOR BOGARDUS:** In other words you feel that surgery may be used as a palliative measure. Would you even consider surgery, at this point, as a palliative procedure?

**DOCTOR WILLIAMS:** I don't think we can palliate. She has so much involvement of the chest wall and such a big skin area, that I think we would be making a great big ulcer out of a small one. I would be willing to consider operating on her after radiation therapy. In this age group however, my own approach would be to consider that what we're aiming at is maximum palliation.

**DOCTOR BOGARDUS:** Right. Doctor Bottomley, do you have any thoughts as to whether you would want to treat her immediately with chemotherapy, or would you rather wait until radiation therapy has had an opportunity?

**DOCTOR BOTTOMLEY:** Well, I think it would be desirable to have a liver scan. She is not symptomatic, so unless there is evidence of metastases, I would think that the best thing you could do is treat her primary lesion with radiation therapy.

**DOCTOR BOGARDUS:** She is one of these patients who falls into a category of being really well palliated by radiation therapy. We can treat the breast, axilla, supraclavicular area, and the internal mammary area. Our chances of curing her, if she does not have distant metastasis, is probably no greater than ten or 15 per cent. But, even at that, it is worth a try from the palliation

\*\*\*\*\*Doctor G. Rainey Williams—Professor and Vice-Chairman of Department of Surgery, Chief of Division of Thoracic Surgery, University of Oklahoma Medical Center.



standpoint if nothing else. We will be able to stop the ulceration, and we can stop the pain. She probably will heal completely, and may very well not have any further trouble with the breast. I really think radiation therapy is the best way to manage her at this particular time and hold other forms of treatment in reserve until we need them.

DOCTOR BOTTOMLEY: You think you actually get a ten to 15 per cent cure rate?

DOCTOR BOGARDUS: Yes, if the patient does not have distant metastases. I think we can cure many of these locally, even though the tumor involves the skin and is ulcerated. We have a number of these cases, as you know, that have never recurred in the chest wall, although they eventually die of their distant disease, which most of them have. It is possible to sterilize all of the local tumor if you treat it radically. The odds are great that she has disseminated disease. I am sure she has tumor in the skin right now, from the appearance of it. These little satellite nodules are most assuredly carcinoma. I think our chances of curing her are slim, but, in any event, we can give her good pal-

liation. Any other thoughts or comments about this?

DOCTOR BOTTOMLEY: If she should have evidence of hepatic metastases on her liver scan, I would suggest that she be treated with 5-Fluorouracil following her x-ray therapy as this is the most effective chemotherapeutic agent for adenocarcinoma of the breast metastatic to the liver. Also, in the event that she develops local recurrence or other metastases (other than hepatic) following her X-ray therapy, she should be considered for treatment with diethylstilbestrol. She is post-menopausal and has a 30 to 35 per cent chance of responding to estrogen therapy. She would have to be watched closely for evidence of stimulation of her disease by the estrogen, and she should have serum calciums prior to and during therapy with estrogen, as it does occasionally stimulate the disease even in post-menopausal women.

*FINAL DIAGNOSIS:* Locally Advanced Adenocarcinoma of the Right Breast.

*TUMOR BOARD RECOMMENDATION:* Radiation therapy to 6,000 rads to the primary lesion and axillary and supraclavicular nodes. □

## Announcing ANNUAL SPRING SYMPOSIA IN GYNECOLOGY AND OBSTETRICS MARCH 13th, 14th and 15th, 1969

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For final program write:

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## *A Visit to C.C.C.P. (Soviet Union)*

HERBERT KENT, M.D.

*Visit Russia? The author spent almost three weeks in the Soviet Union visiting major cities in the north and south. His impressions will help you decide to take that trip.*

**V**ISITING THE U.S.S.R. (Cyrillic C.C.C.P.) in 1966 was an experience to be shared. My reason for visiting the Russian Soviet Federated Socialist Republic was an invitation to present a paper at the First Soviet-American Conference on Physical Medicine and Rehabilitation, September 24th to October 1st, 1966 under the auspices of the American Society of Hydrology. The visit also included an extended tour. From Leningrad in the subarctic belt to the warm Caucasian spa cities; Piatigorsk (Pyatigorsk), Kislovodsk, Sochi, and Yalta on the Crimean Peninsula, each locale was an experience. For other physicians embarking on a similar journey, some facts and impressions are worth noting if only to allay apprehension.

### PORT OF ENTRY

There is no problem in entering Russia, especially if you are invited and have red carpet treatment all the way. Even if you

aren't invited the dollar attraction is powerful. Tourists now are persona grata.

A visa is easily obtained since a tour is usually handled through one of the several accredited travel agencies in the United States. "Intourist," the official U.S.S.R. agency, arranges hotel accommodations, meals, bus or limousine service, an English-speaking guide or interpreter and free entrance to museums, all for the bargain rate of \$35.00 per day. This is deluxe class. Cheaper arrangements are available.

Our jet flight into Russia was by "Aeroflot," the official (and only) Russian airline from Prague to Moscow, approximately two hours 40 minutes (1,500 miles). More recently, by mutual arrangement, Pan-American Airlines now has regular direct flights to Moscow.

### ARRIVAL IN MOSCOW

The new (1964) Mockba (Sheremenko) International Airport resembles Kennedy International Airport in New York. It is quite modern and a surprise to the visitor. Soviet Customs officials are extremely cordial. There was no luggage examination on entrance or departure.

Foreboding darkness and a dreary shower greeted our contingent of 30 people. This somber atmosphere was more than offset by the welcome and banquet reception prepared for us at the International Airport Restaurant. Champagne was served, of course.

Professor Aleksandr Nikolaevich Obrosof, Chief Physiatrist in the Soviet Ministry of

Presented at the 45th Annual Session of the American Congress of Rehabilitation Medicine, August 27th-September 1st, 1967, Americana Hotel, Bal Harbour, Florida.



Health and Director of the State Institute for Balneology and Physiotherapy of the Russian Soviet Federated Socialist Republic shook hands with each of us. He was a thoughtful, gracious and sincere man past middle age with a halo of grey hair. He did not speak English, so Intourist guides served as interpreters. With him was Doctor Erina Khitrik, Director of the Caucasion Spas and Health Institutes. She was a large, good natured, smiling woman who couldn't do enough throughout our visit. The reception committee also consisted of two Intourist guides, Tamara Kotelnikova and Elvira (Ella) Muranueva. Tamara was darkly attractive with sharp, mature features, the mother of a six-year-old boy, and spent most of her time with us in Moscow. Ella was young, pert, vivacious and pretty with a teenage charm, who chaperoned us like a hen throughout the entire tour. Being unattached, she never lacked male company. Both spoke excellent English and were the key to a pleasant stay in the Soviet Union.

Although there are several good hotels in Moscow, the "Nationale" or "Metropole" are considered the best historically. The "Ukraine" is a fairly new, 30-story hotel, but somewhat stiff in its atmosphere. The newest and most modern is Hotel Rossiya (Russia), a massive 6,000 bed hotel overlooking the Kremlin.

Our group was fortunate to stay at the "Nationale." This faces Red Square across Maneghny Place, and although Mid-Victorian, reeks of past events. Lenin once ran the government from one of its apartments. (Doctor Sidney Licht, our key figure, was given the signal honor of being assigned to that apartment by grateful influences sponsoring the tour.) My own room on the fourth floor fronted the Kremlin and the view of the crimson brick walls and yellow palace with the overhanging red star was breathtaking when viewed through the double windows. At night, I left open a little square trap window, the *fortoshka*, for fresh air and ventilation.

The suite floors were covered by Bukhara rugs. Actually, there were three rooms, the vestibule, sitting room and bedroom. The sitting room was large with a desk, couch, cushioned chairs, a center table with a white

tablecloth and a cut crystal decanter of water with crystal glasses.

As for the bathroom, the less said the better. Russian plumbing must be seen to be believed. It is an incongruity. The tub and wash basin were not bad, but the commode, with something resembling a plastic toilet seat, gave one constipated thoughts. When matched by the overhead pull gravity flush and an anachronism of what apparently was toilet paper, one could only sympathize with the average citizen's lot in this area of hygiene. A visitor should always take his own toilet paper and soap. The red (!) soap provided smells antiseptic and was difficult to lather.

#### MEALS AND SOME PRICES

At the "Nationale Hotel," as elsewhere, the dining rooms were clean and comfortable. To expedite our meals and prevent delay, everyone in our party ate the same foods, rather than select from a menu which was available if you could read French, German, or Russian. By U.S. standards, these were well-cooked, tastefully served and of sufficient variety to enable us to put on weight during our stay. Some typical menus were:

Breakfast: Caviar (black)

Black Russian bread (excellent), butter,

Salami or smoked salmon

Omelet or boiled egg

Coffee (surprisingly good) or tea

Lunch: Sturgeon and egg salad

Borscht (cabbage style vegetable-mutton soup)

Veal stew, boiled potatoes, carrots (Shashlika)

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*Since his graduation from the Royal College of Physicians and Surgeons, British, Herbert Kent, M.D., has been certified by the American Board of Physical Medicine and Rehabilitation. In addition to his private practice of medicine in Oklahoma City, he is Associate Professor of Physical Medicine and of Preventive Medicine and Public Health at the University of Oklahoma Medical Center.*

*Doctor Kent is Past-President of the Oklahoma County Heart Unit, Oklahoma Heart Association. He is a Fellow of the American Academy of Physical Medicine and Rehabilitation and a member of the American College of Chest Physicians.*

## Visit / KENT

Pickles	Mineral water
Baked Alaska	Coffee or tea
Dinner: Caviar (red)	Black or white bread, butter
Chicken Kiev—Peas, potato chips, creamed carrots	
Chocolate Torte	Champagne or wine
Fresh fruit (apples, grapes)	
Coffee or tea	

The prices for foreigners when converted from a rouble = \$1.12 approximately:

Wines	\$1-4.00
Champagne	3-5.00
Vodka (1/5)	1.75
Beer	.40
Tangerine, Lemon or Orange Soda	.15
<b>Bread</b>	
Loaf (depending on size)	.08-.20
Cake	2.00
Iced Cake	2.80
<b>Meats</b>	
Whole Chicken (average size)	2.75
Hamburger Meat (lb.)	1.00
Fish	.40
<b>Dairy Products</b>	
Butter, lb.	.50
Milk (1 pt.)	.50
<b>Miscellaneous</b>	
Coffee (1 lb.)	.32
Tea (1/4 lb.)	.23
Postcard stamp	.14
Postcard stamp airmail	.16
Haircut	.60
Wave and Set	1.00
Men's Shoes, pair	55.00
Women's Shoes, pair	12-30.00
Women's hose (nylon) pair	3.50
Radio	150.00
TV	350.00
Tennis Racquet	9.00
Chess Set	4.50
.22 Rifle	20.00
Double Barrel Shotgun	40-150.00
Motorcycle	650.00
Bicycle	40-75.00
Cheap Russian Car	2,000.00
Suit	70-100.00
Overcoat	130-150.00
<b>Wages</b> (1 R. = \$1.12)	per month
Nurse (? R. N.)	\$ 65.00
Physical Therapist	100.00
Interne	90.00
M.D. (5 years)	100.00-175.00
Professor	225.00-650.00
Teacher in University	225.00-550.00
Engineer	550.00-1,350.00
Bus Driver	100.00-125.00
Ballet Dancer	1,350.00-5,550.00
Factory Worker	65.00-100.00
Factory Manager	350.00
Taxi Driver	115.00
Street Sweeper	40.00
Cook	65.00

Lest one gets the wrong impression, we

should emphasize that these figures are related to the tourist rates of exchange. More realistically, a rouble is actually worth less, but wage scales are better guides to relative values. For example, postage for an ordinary letter costs 14K. (Kopecks) or about 14c. An airmail stamp costs 16K. or 16c. More correctly, hours of work would be a more accurate method of comparison.

## RED SQUARE

This exciting piece of rectangular real estate is bounded on its long sides by walls of the Kremlin, Lenin's Mausoleum, and GUM (rhymes with "boom"). On its shorter sides stand candy-striped St. Basil's Cathedral, built during the reign of Ivan the Terrible, and the multi-spired, brick red Historical Museum. Here gigantic military displays are given at least twice a year; May Day (May 1st) and Revolution Day (November 7th). On the upper level of Lenin's Tomb, the current leaders of the Soviet Union often pose in mute evidence of their existence.

Standing in the middle of Red Square one experiences a spine-tingling thrill at the significance of its place in the world's history. The macabre monument to V. I. Lenin (Stalin is no longer his mate) is easily accessible to tourists. The one-fourth to one mile queue was no obstacle for our Intourist guide. We were taken to the head of the line without apparent resentment and the Russians, with benign hospitality, followed us through with their eyes as if in reverence. Lenin's embalmed body is life-like even to the stubble of whiskers alongside his pointed beard. Madame Tussaud couldn't have improved on it.

GUM (Gosudarstveniy Universalniy Magazin) means Government Universal Store. It is the Russian version of Macy's and Gimbel's combined. Our modern, enclosed, air-conditioned, mall-type shopping centers may have originated here. It actually is an arcade of over 250 small stores selling a variety of goods under one glass roof. The wares were not impressive, but 250,000 shoppers daily are apparently satisfied. Outside GUM, vendors sell moroshenoye (ice cream), blenchiki (meat pancakes), pirozhnoye (pastry), and a vending machine dispenses into a communal plastic glass, frukto-voya vada (fruit soda).





Physiatrists, members and wives of the American Society of Hydrology visiting a research center in Piata-gorsk.

#### MEDICAL CONFERENCE

The First Soviet-American Conference on Physical Medicine and Rehabilitation was held in the Intourist Building, a mauve colored structure next door to our "Nationale Hotel." It was formerly the U. S. Embassy. Here Professor Obrosof presided with his staff. Doctor Sidney Licht, representing the U. S. group, also had a place of honor on the platform. After the participants were greeted in Russian and English, the Symposium was formally opened.

The audience included about 100 Russians. Each paper was read in the respective languages with translated summaries. The papers were generally of high quality. To give an idea of the subject matter of even a few papers is impossible. Advanced ideas were treated respectfully and fairly. One of the Soviet papers on Interferential Currents provoked some discussion. These papers are expected to be published in the future.

The highlight of the two-day meeting was the closing, sumptuous cocktail party. The variety of foods was endless, with the usual abundance of caviar, sturgeon, whitefish, smoked salmon, cold cuts, tomatoes, fruits, etc. Vodka, champagne, wine, and soft drinks were quite sufficient to carry the many toasts well forward. A unique twist was sub-grouping each American with a Soviet physician and an accompanying interpreter to permit informal and individual conversations.

When greetings had been exchanged, it was interesting to watch the other's features as thoughts and questions were exchanged. Lines and shadows on the faces of one's comparable number transcend speech. Such discussion of common medical problems can contribute toward improvement not only in scientific communications between our two countries, but also toward a basis for peace.

#### HEALTH SERVICES IN THE U.S.S.R.

As a result of these conversations, we



learned about health services in the U.S.S.R. The responsibility for all aspects of the Soviet citizen's health is held by the State. Planning, supervision, and execution are by central direction; however, operational problems are managed at a local level.

The Minister of Public Health is the supreme health authority, responsible to the Council of Ministers, the highest executive body in the U.S.S.R. Indirectly, he is responsible to the Central Committee of the Communist Party.

To the Health Ministries of the 15 Republics, Moscow dictates broad policy. However, they enjoy autonomy in local medical planning. The Academy of Medical Sciences in Moscow gives advice on medical and scientific problems while coordinating research efforts.

Regional areas for health coverage are well organized. *Oblasts* divide republican areas and may contain a million people. They may be subdivided into *rayons* (regions) resembling districts and serve about 100,000 people. They have about 500 acute beds available and may be a polyclinic. The rayon is again subdivided into *uchastoki* or units of 5,000 people. These are served by the equivalents of general practitioners who are based at the polyclinic. These men handle diagnosis, preventive medicine and public health matters including health education. In the rural areas, (State or Collective Farms) there are individuals with less training who are usually women called *feldschers* resembling our military corpsmen. As a matter of fact, nearly 80 per cent of the physicians in Russia are women.

During regular medical school training, which takes six years, students receive a stipend of about 90 roubles a month. *Feldschers* require only three years of training. Nearly 20,000 doctors are graduated annually with a ratio of 1:450 patients. After graduation, a doctor can be directed to practice anywhere in the U.S.S.R. for three years.

Every polyclinic generally has a physiatrist on its staff. Physical Medicine is practiced fairly strictly, more akin to our old concepts. Rehabilitation Medicine, that is, treatment of the "whole man," in all the facets as we understand it in this country,

does not appear to be the practice in Russia. Rather, keeping the worker well, *i.e.*, preventive medicine, seems to be the concept followed.

A recent report on Russia by a team of five American physicians under the direction of Assistant Surgeon General Harold M. Graning, also indicates the overemphasis given physical medicine and special forms of hydrotherapy in the overall medical care programs.

#### INSTITUTE VISITS

Early after breakfast our bus took us to the suburbs to visit Professor Popov and his staff at the Institute of Prosthetics. Although unsmiling, he was most cordial. With the assistance of his chief engineer, the famous "electric hand" was demonstrated. This prosthesis appeared to be well-engineered and when viewing its component parts, we realized the advances the Soviets have achieved in this direction. Their miniaturization apparently is an advanced art. He also showed us the facilities where force-plate kinesiology studies are being made in prosthetic research. Certainly, the Russians are not lagging in such developments.

In the afternoon, we visited Professor Obrosof's Central Scientific Research Institute of Kurortology and Physiotherapy. The building resembled a 200 bed hospital where all physical medicine modalities were available for therapy including research facilities. We were impressed by the excellent studies being done in many important areas of this field.

To leave Moscow, is to leave a luminous memory. One can never forget the Bolshoi Ballet in the new 6,000 seat Congress Hall; the Lomonossov University, 32 stories high with its 35,000 students; the Cathedral of the Ascension of the Virgin Mary; the Great Cannon (40 tons); the Great Bell (20 tons) in the Kremlin, Alexander Gardens, Gorki Park, Dynamo Stadium, and the outdoor swimming pool which accommodates over 13,000 swimmers; and Moscow Library with its 17 million books. Leaving the Capitol City of Russia, after a whirlwind of activity, makes one optimistic for the future. One feels the national hunger for freedom and culture. Hugging the soil are the heroic



guardian people who continually expressed their hopes for peace.

#### MOSCOW DEPARTURE TO CAUCASUS

The weather in Moscow was intermittently sunny and showery with a temperature around 60° Fahrenheit. However, on our departure we shivered in 40° frosty weather which was followed by snow. The "Tupelov" pure jet SU #707 took off at 9:30 a.m. and two hours later, 1,000 miles further south, we landed at Mineralny Vody (Mineral Water) in bright sunshine and a 70° subtropical climate. The air terminal was quite modern and contrasted sharply with the ordinary Russian workers dressed in peasant and farm clothing, who were waiting for flights. We were met by Intourist President Borshenko who gave permission for airport pictures—a first—since photography at air fields was not ordinarily allowed. Also, one of the chief Intourist guides, Vera Bochanova, joined the group and accompanied us throughout the Caucasian spa country acting as an expert medical interpreter as we visited medical institutes in the area.

We bussed to Pyatigorsk, a major center of Soviet spa therapy in the Caucasus. The city is situated on the left bank of the Podkumok River. Nearby is Mt. Beshtu with its five peaks. Research in many of the spas which dot the Caucasus and Black Sea coast is carried on by the State Research Institute of Kurortology and Physiotherapy at Pyatigorsk. These spas usually offer patients individual rooms with baths while providing excellent food and well-organized recreational activities.

The Soviet worker is given a free 21-day vacation at one of these spas when prescribed by his physician. Those who are not so accommodated or wish to stay longer, may do so on a nominal fee-for-service basis. Foreigners too, may avail themselves of spa treatments at less than \$10.00 per day inclusive.

There are 12 sanatoriums in Pyatigorsk. The local springs supply waters mostly of hydrogen sulfide and alkaline content. They are used mainly for drinking and supposedly possess highly curative powers for a multitude of ailments. Many of the spas are

specialized: cardiovascular, arthritic disorders, alimentary diseases, etc. At the Lashchka Spa in Pyatigorsk neurologic diseases are also treated. Opposite the "Mashuk Hotel," where we stayed, was a park filled with strolling people sipping special-shaped cups of mineral water.

One morning several of us visited the local "free market place" where the local peasantry can sell their wares in open competition. This is a unique experience in a communistic economy.

Among the best known spas is one we visited in Kislovodsk, about 70 miles by bus from Pyatigorsk. They average 300 sunny days a year and its mineral springs date back to 1717. It is situated in a picturesque valley about 1000 meters above sea level.

The largest spa building has Greek and Doric architecture and we spent several hours partaking of its baths, many of which were saturated with carbon dioxide gas. Kislovodsk is best known for its famous "Narzan" mineral water. This tastes like soda water with a pinch of salt.

Surrounding the 35 large sanatoriums in this region are walking areas up and down the hills. These are marked off in meters and also have benches along the way with medical personnel available in way or rest stations. Blood pressure and pulse may be determined here on request, particularly if distress develops on walking up steep gradients.

Before leaving we had lunch at the "Sea Gull," a local restaurant at the corner of a busy street in Kislovodsk. The service, food and cleanliness were impressive as it was in all other places we visited.

Before departing the Caucasus, we drove approximately 50 miles along a country dirt road to a state farm where we were handsomely treated. Although the buildings were substantial, plumbing and toilet facilities were generally primitive. We made a tour of the vineyards where young students plucked grapes for the winery. The end of the tour occurred in a wine cellar where we tasted many excellent wines from barrels, encouraged by Russian girls with happy smiles. Fortunately we were able to exit upright, but we would have failed had we persisted longer.



## SOCHI—BLACK SEA

Sochi is to the Russians what Miami Beach is to the Americans. Our turboprop "Ilyushin" brought us to a gay reception (including bouquets) by the mayor of Adler, the airport stop. Our bus eerily wound its way along a narrow coastal road to the "Primorskoys Hotel," a fairly modern structure adjoining the promenade and giving a splendid view of the Black Sea. Sochi is the largest seaside resort in the Soviet Union and the most popular. The climate is superb, almost tropical, and the sea-bathing is extremely pleasant except for the beaches, which are rocky and pebbly. The golden bodies of bikini-clad men and women on protective rugs or slats gave added color to this peaceful scene. Indolently reclining by the sea, they appeared to sing the joy of living, a perennial festival for body and soul. Here one can find a mystic or a poet, but not a revolutionary. Conversation, chess, flirtation or laziness is reflected in this mirror of peace.

Visits to sanatoriums, the Institute of Spa Treatment and Physiotherapy, and the famous Sulphur Springs of Matsesta, were made during the morning and afternoons. At the Institute, we saw patients being treated by nasal douche for sinusitis. Some even, with thinning hair, hoped for the miraculous restoration of hair, dousing in the bath. At night, by street lamps and the light of the moon, we explored the streets of Sochi. Several of our group saw the Azerbaijan Ballet Company dance "Swan Lake," while others were attracted to the open air Lenin Theatre for a "Moscow Music Hall" in French. Some also caroused as Amerikanskis at the hotel's dining rooms, twisting their way to the strains of a jazz orchestra.

Sochi is the belvedere of all the Russians. A cruise on the Black Sea was most convincing and this incomparable tropical paradise could only be completed by a final performance. The farewell banquet atop the 3,000-foot Akhoun Mountain, presided over by Professor Obrosof who flew from Moscow for this occasion, became the frosting on the cake. Some say 14 toasts were made in wine, cognac and champagne. This de-

pends on one's hangover. Nonetheless, it was a whale of a party and a fitting climax for many on the tour.

## YALTA

The group split at Sochi, some going on to further adventures; others went on an extended tour to Yalta and the "Oreanda Hotel."

On the southern Crimean coast, known as the "Pearl," is a place one cannot miss. Yalta, encircled by white-rock mountains, nestles in luxuriant, subtropical foliage. It reminded of the Cote d'Azur along southern France. Being autumn, the weather was quite warm for bathing and bikini-clad damsels were seen along its beaches. Instead of pebbles, the beach consisted of dark, hard-packed sand. There was much to do and see. Chekhov's House, "Massandra" wineries, Alupka Palace and Levadia Palace of the Yalta Conference fame, engaged all our days.

## LENINGRAD

There is an excellent motor road from Yalta to Simferopol, most of which has been electrified for the trolley-bus. We picked up our flight to Leningrad after a winding journey through the Crimea. The distance is about 1,200 miles (1,464 Km). Our TU-104 made it in one hour and 40 minutes.

Leningrad (St. Petersburg, Petrograd) is known as the hero-city to all Russians because of its resistance to German conquest during World War II. Our airport bus took us to the "Hotel Astoria" along famous Nevesky Prospekt, the Fifth Avenue of Leningrad. This hotel is to Leningrad what the Waldorf-Astoria is to New York City and is graced by crystal chandeliers and an exceedingly well-furnished dining room and ballroom. There was more opulence here than anywhere we visited. One may compare Moscow with Chicago and Leningrad to Boston. Its people are the best-dressed and most sophisticated, as far as could be determined by our short visit. One cannot do justice to a description of the city, just as if one tried to describe all of New York in one paragraph.

The highlights are the Winter Palace and adjoining Hermitage Museum with art treas-



ures equal to or surpassing those found in Paris' Louvre. The beauty paralleling both sides of the Neva River with the cruiser "Aurora," relic of the Revolution, Leningrad University buildings, Peter and Paul Fortress Monuments; Decembrist Square; the Admiralty Building with its conspicuous gold spire (a guide from anywhere in the city); the Summer Palace in Petrodvorets at the suburban city of Pishkin; St. Isaac's Cathedral; finally, not to forget the inspiring Leningrad Symphony Orchestra and the gay Leningrad (one-ring) circus.

The impact of our visit to Leningrad was best pondered in quiet solitude months later.

To reflect on the history of the city and its role in the Russian World requires a prolonged cascade of ideas. Nonetheless, it was a worthwhile experience.

SPAHSEEBUH

"Thank you" was a common Russian expression learned. To those responsible for making this visit pleasant and possible, spahseebuh! Leaving C.C.C.P. is as thrilling as entering the Soviet Union. We boarded the plane for Moscow full of overflowing impressions accumulated during our visit. □

1111 North Lee, Oklahoma City, Oklahoma 73103

## MEDICARE AMENDMENTS INTRODUCED

In early January, Senator Aiken of Vermont introduced two bills into the United States Senate to amend the Medicare laws. Senate Bill 110 would remove the deductibles and co-insurance features under Title XVIII; permit women to qualify for benefits at age 62; re-define hospital services under Part A to include payment for the professional services of radiologists, pathologists, anesthesiologists, and psychiatrists; permit referral of patients for care in extended care facilities from a hospital out-patient clinic instead of the present provision which requires three days of prior hospitalization; authorize for one routine physical each year; provide compensation for prescribed drugs (on a generic basis) under Part B; and provide eye and dental care under Part B. The bill also provides that the Surgeon General would be authorized to *establish a schedule of fees for physician services based upon the community "prevailing fees."*

Senate Bill 111 would provide that the program would not pay more for a medical procedure than the average payment for that same service by the local Blue Shield plan during the previous year. All patients would be reimbursed directly by the carrier with no billing done to the carrier or the patient by the physician.

In commenting on this latter bill, Senator Aiken said that physicians would be required to take all their Medicare patients on these terms and that they would be compensated for them on a "reasonable allowance" basis with no co-insurance or deductibles.

Both bills are presently in the Senate Finance Committee of the United States Congress. □

## PROFESSIONAL CORPORATIONS: Tax Equity For The Self-Employed?

The 10th Circuit Court of Appeals has handed down a decision in the Empey Case and attorneys are now advising physicians to form professional corporations. On January 8th of this year the Court declared that corporations formed under state law to furnish professional services shall be taxed as corporations.

Arriving at this decision, the Court declared invalid the 1965 Treasury Department regulations which attempted to distinguish between business and professional corporations. Pointing out that the United States Congress had never made such distinction, the Court said, *"We conclude the 1965 regulations are 'unreasonable and plainly inconsistent with the revenue statutes,' and are therefore invalid. Moreover, we think the 1965 regulations 'amount to an attempt to legislate' and are therefore invalid."*

In view of the fact that the Supreme Court of the United States has held that Treasury regulations will be disregarded when they are contrary to the "unambiguous mandate of the statute" and when they "amount to an attempt to legislate," this decision by the 10th Circuit Court of Appeals would appear to remove the I.R.S. stumbling blocks and clear the way for professional persons to make use of the corporate tax statutes and the advantages therein.

Medical and legal publications are now advocating that professional persons incorporate immediately. In an article by Sheldon H. Gorlick, LL.B., a Medical Economics senior editor, it was pointed out that the advantages of incorporation far outweigh the disadvantages which might occur if the I.R.S. wins its battle against professional corporations.

"Five federal district court decisions favoring professional corporations appear to leave the I.R.S. little room for further maneuver," Gorlick said. "Consider the advantages of incorporating and take the step right now if your state permits you to. If the battle continues to go against the I.R.S., you may never have to pay back the taxes that such a move would save you—even if the agency succeeds in getting the law changed. The tax savings you could realize immediately are secure unless there is a sudden shift in the rulings by the courts in favor of the I.R.S. But that would be in the face of five precedents, so the chances of it happening are slim."

The article quoted was written prior to the 10th Circuit Court of Appeals handing down its decision in the Empey case. This is the first case that has been handled by an appeals court and will be cited as precedent when federal court cases of the same nature come up in other circuits.

### Oklahoma Law

At the urging of the OSMA and several other professional organizations, the Oklahoma Legislature adopted the "Professional Corporations Act" in 1961. This act provided, "one or more individuals, each of whom is licensed to render a professional service, may incorporate a professional corporation by filing Articles of Incorporation with the Secretary of State." The section then went on to set out special requirements necessary to filing for professional corporation status.

The goal and effect of this legislation was to make it possible for members of selected professions to become stockholder-employees of

their own corporations in order to achieve tax equality with the employees of business corporations whose employees enjoy the benefits of pension and/or profit-sharing plans and other "fringe benefits." (Fringe benefits will be discussed in the next section of this article under the sub-head "Advantages vs. Disadvantages.")

The Oklahoma statute provides that professional corporations may be formed to furnish "professional services." This latter term is defined as the personal service rendered by medical physicians or surgeons, osteopathic physicians or surgeons, chiropractors, chiropodists, podiatrists, optometrists, veterinarians, architects, attorneys and dentists.

Each such corporation is limited to rendering one specific type of professional service and the services ancillary thereto and such corporation shall not engage in any other business. A provision is made for such a corporation to own real and personal property necessary or appropriate for rendering the type of professional services it was organized to render and that such corporation may invest its funds in real estate, mortgages, stocks, bonds and any other types of investments.

The corporate name of every professional corporation organized under the act must end with the words "corporation," "incorporated" or the abbreviations of either word. However, it does provide that the regulating boards of each profession may adopt rules making further requirements as to the names of professional corporations.

No person may be an officer, director or shareholder of a professional corporation unless he is duly licensed to render the same specified professional services as those for which the corporation was organized. While providing that no person may be simultaneously an officer or shareholder of more than one professional corporation, the statute provides that an individual may be a director of more than one.

In keeping with the limitation of incorporation by professionals of like licensure, the statute provides that the shares of capital stock in such a



corporation are freely transferable only to a person who is duly licensed to render the same specific professional service as those for which the corporation was organized. One of the requirements for such a transfer is that a certificate by the appropriate licensing board be issued stating that the person to whom the transfer is to be made or to whom the shares are to be issued is duly licensed.

The free transferability of stock as set out in the statute does not preclude the articles of the professional corporation from stating that any transfer of stock must be agreed on by all shareholders. This allows the professional group to determine for itself who will be a member of the corporation.

The act does not alter any law applicable to the relationship between a person rendering professional service and a person receiving such service. Thus, the physician would continue to be liable for his personal malpractice.

Provision is made that nothing in the statute shall restrict or limit the powers and duties of the various professional regulating or licensing boards. This means that the Board of Medical Examiners may regulate the individual's right to practice medicine in Oklahoma even though the individual might be an officer, director, shareholder or employee of a professional corporation.

#### **Advantages vs. Disadvantages**

The advantages, as well as the disadvantages, of professional persons doing business as a corporation are many and varied. However, in view of the decision in the *Empey* case, it is now the opinion of most corporate attorneys that the advantages do, in fact, far outweigh the disadvantages.

Physicians practicing medicine in a professional corporation are considered employees of that corporation. As employees they can avail themselves of the "fringe benefits" of the corporate form of doing business.

The most obvious "fringe benefit" is the pension plan or profit-sharing plan, or possibly both, that could be set up for professionals. Corporate

contributions to an approved plan would be deductible as a legitimate business expense of the corporation and the employee would pay no tax on the contributions made annually to the plan on his behalf. The income earned each year by the fund would not be subject to income taxes. Upon retirement, the beneficiary-employee would receive favorable tax treatment since he would probably be beyond his high income producing years and therefore in a lower tax bracket.

When a corporation sets up a profit-sharing plan, the stockholders have the right under the law to delay "vesting" of benefits. Such a delay allows the corporation's plan to withhold some or all of the money set aside for an employee who leaves before a stated number of years.

This type of a tax sheltered retirement plan is far superior to the so-called HR 10 or Keogh plan. An unincorporated professional establishing a Keogh plan for himself must also establish one for all of his employees. Any contribution he makes to the plan in the name of his employees immediately vests in the employee. This means that any time an employee chooses to leave, he may take his portion of the contribution out of the program. If a number of employees chose to leave employment in the same short period of time, it could possibly wreck the doctor's retirement plan.

Under the profit-sharing plan available to corporations if the departing employee has not fulfilled the minimum number of years, he leaves behind all or part of the contributions originally made for his benefit for the benefit of the others in the program. Further, the nonprofessional employees and the doctor-stockholders under the profit-sharing program can withdraw limited portions of their vested profit-sharing in case of personal emergencies that are spelled out in the plan itself.

Another advantage of the corporate form of doing business is the limited business liability of the corporation stockholders. A doctor-stockholder can't be held personally liable for the debts of the corporation. If the corporation ever ran into financial

difficulty, the stockholder could walk away without any legal obligation to pay the corporation's debts from his own pocket.

Even though the statute specifies that individual professional liability shall not be limited by incorporating, there are advantages in this to the other physician-stockholders. In case of a malpractice claim against a doctor in corporate practice, the patient will ordinarily look to the individual doctor for payment, so a doctor who incorporates will continue to carry malpractice insurance. However, one doctor-stockholder isn't liable for the malpractice claims against his colleague who is a fellow stockholder. Frequently, in partnership arrangements, one physician is held liable for such claims against his partner.

Other savings available to the corporate practice include the purchase of group life insurance on all of the professionals, the cost of which is deductible as a business expense. The premium payments are not income to the professionals and therefore are not taxable to them personally. The corporation could also buy health insurance, including medical, hospital and disability coverage, and deduct the premium. Here again, the premiums would not be income to the professional.

In the event one of the professionals becomes disabled, the corporation can continue to pay his salary and deduct up to \$100 a week for doing so.

Other advantages of the corporate form of practice can be outlined to the interested physician by his personal attorney.

Some of the disadvantages of incorporation include the difficulty of dissolving such a practice in an equitable manner. The transferability of stock would present some difficulty if the other physician-stockholders could not agree as to whether or not the prospective stockholder should be allowed to purchase the stock. In the absence of a requirement that the stockholders must agree to the transfer, it would be possible for an unwanted professional to buy into the corporation.

The major disadvantage to incor-



poration at this time is that the attitude of the Internal Revenue Service is unknown. It may be that the I.R.S. will seek to make new regulations to further hamper such corporations, or even attempt to get Congress to change the present statutory definition of corporations to entirely exclude professional corporations from tax benefits.

Even though it is doubtful they would attempt this latter approach, it is possible they would seek Congressional approval of a change in the federal tax to lower the present ceiling on the deductions that a corporation can take for contribution to a profit-sharing fund. This would limit the benefits of incorporating, but since it would apply equally to all corporations, it would have less chance of enactment because business interests with established plans would object.

#### History

The following is a brief review of the historical background of federal tax laws, regulations and professional corporations:

It is interesting to note that for many years the Treasury Department tried to include as many taxpayers as possible in the corporate category. In fact, there are many unincorporated medical groups throughout the country which have been taxed as corporations for several years.

In 1935, a landmark case in this area was decided by the Supreme Court. *Morrissey vs. Commissioner* dealt with the statute and regulations which defined the term "corporation" to include "association" and spelled out the characteristics of a corporation which, if present, would qualify an association to be taxable as a corporation for federal income tax purposes. Simply, the regulation stated that if an organization had the requisite corporate "resemblances," it would be treated as a corporation for tax purposes.

In the *Kintner* case, heard in 1954 in the U.S. Court of Appeals for the 9th Circuit, the Court cited with approval the commissioner's own regu-

lations and held that a medical association was a corporation for federal tax purposes and that contributions by the association to a pension plan established by it were not taxable to the associates. Following this decision, the I.R.S. did several turnabouts and it soon became apparent that they were only paying lip service to the *Kintner* decision. In 1960, the so-called *Kintner Regulations* were adopted for the purpose of making it as difficult as possible for unincorporated organizations to be taxable as corporations. After the adoption of these arbitrary regulations more than 35 states, including Oklahoma, enacted legislation authorizing the creation of professional associations and/or corporations.

The enactment of these local laws effectively blocked the I.R.S. until February, 1965, when it adopted regulations which allowed the Service to decide for itself, notwithstanding local law, whether the organization had the requisite corporation resemblance.

Unlike the 1960 regulations, those in 1965 were directed at incorporated organizations. It was these regulations at which the *Empey* case was aimed.

In that case, the district court held that the classification of an incorporated organization as a partnership is inconsistent with the statutory definitions of partnerships and corporations as set out in the Internal Revenue Code which has remained substantially unchanged since 1932. The definition of "partnership" refers only to "unincorporated" organizations and thus necessarily excluding "incorporated" organizations. Neither statute nor case law supports the Treasury's position that corporate organizations of professional men such as doctors and lawyers must be taxed as partnerships and not as corporations.

The Court concluded that "the Treasury regulations are inconsistent with the statute and the judicial construction thereof and that the regulations constitute the exercise of non-delegatable legislative function and are invalid and unenforceable."

Since the federal district court's decision in the *Empey* case, other district courts throughout the country have issued similar holdings in other cases.

The Treasury Department immediately appealed the *Empey* decision to the 10th Circuit Court of Appeals. That Court reiterated the district court's holdings and stated, "The trial court, in a well-reasoned opinion, held that the 1965 amendment was invalid and that the corporation was entitled to be treated as a corporation for the purposes of federal income tax. We agree with the conclusion of the trial court."

Except for the possibility that the Treasury Department will appeal this decision to the United States Supreme Court, this decision fairly well puts an end to the I.R.S. attempts to deny professional corporations the benefits available under the federal corporate tax structure, at least in those states embraced within the confines of the 10th Circuit.

"One thing must be remembered," according to Arnold J. Streich, Director, Corporate Law Department of the AMA, "the opportunity to secure tax benefits by achieving corporate status for professional corporations and professional associations should not blind professional men to the nontax factors which, if considered in their proper perspective, would militate against the formation of such organizations." In his presentation at the Legal Conference for Medical Society Representatives, the director went on to say, "A most important consideration is the compatibility of the individuals who will join in group practice. This question of compatibility is not limited to personality trait differences, but covers questions of age, salary, experience and voice in management. Another important and related factor is the ability of the individual members to disassociate themselves from thinking and acting as partners."

Despite the disadvantages and the possible drawbacks of incorporating, attorneys, tax consultants, management consultants, and accountants are recommending "incorporate now." □



## Legislative Digest

The Oklahoma State Medical Association's Legislative Committee has taken a position on eight bills thus far introduced in the 32nd Session of the Oklahoma Legislature. The following is a resume of the bills introduced and OSMA's position:

**House Bill 1020** by Spearman. This is an act that would repeal the psychologists' licensure bill that was passed in 1965. When this bill was originally introduced the OSMA opposed it on the grounds that the licensure of psychologists should properly be in the hands of the medical community and preferably in the hands of the State Board of Medical Examiners. We were unsuccessful in our efforts to get the bill defeated or changed, and now there is some concern among the psychologists' ranks that there is discrimination by the licensing board. The conflict seems to be between clinical psychologists and educational psychologists. Representative C. H. Spearman of Edmond, when introducing the bill, explained that there were psychologists in the state who had been refused licensure that were as qualified academically as the psychologists who were being licensed and therefore has asked the legislature to repeal the act. *OSMA deferred action on this bill pending further study.*

**House Bill 1022**, introduced by Representative Wiley Sparkman, is a bill that is commonly referred to as the Oklahoma Medical Laboratory Licensure Act. This bill was drafted by ten allied health organizations over a period of almost a year. It establishes minimum standards for laboratories and laboratory personnel. Doctor A. B. Colyar, Commissioner of Health, is the sponsor of the bill and has had the full cooperation of the OSMA in the interim session and thus far in the legislative session. Members of the association have testified numerous times on this particular legislation. *OSMA supports this bill.*

**House Bill 1033** by Sparkman. This

is a public health bill introduced by the State Health Department and is a companion bill to House Bill 1047. It appropriates a million dollars for the operation of county, district and cooperative city-county departments of health. It provides an equitable formula for the distribution of the funds. *OSMA supports this legislation.*

**House Bill 1047**, introduced by Sparkman, is an act relating to public health that expands the existing county boards of health and authorizes the Commissioner of Health to establish health districts and district boards of health. The bill as originally introduced was opposed by OSMA's Legislative Committee but has now been amended and *in its amended version is supported by OSMA.*

**House Bill 1054** by Payne and Nance is referred to as the Uniform Anatomical Gift Act. This bill provides a method for the donation of all or parts of the human body to a donee prior to or after death. It establishes a method by which the donation is to be made and by whom.

This bill was drafted by the National Council on State Governments and approved by the American Medical Association, the American Bar Association, the Oklahoma State Medical Association and the Oklahoma Bar Association. It clears up some deficiencies in existing statutes and in the Legislative Committee's opinion would be good legislation. *OSMA supports this legislation.* It has passed both the Senate and the House and awaits the Governor's signature.

**House Bill 1143** by Derryberry is an amendment to the existing Workmen's Compensation Law that would require that upon written request, an employer may provide for an injured employee, in lieu of medical treatment, treatment by prayer or spiritual means. This type amendment is common to health bills in that religious groups would like to preserve the rights of their members to receive the treatment that they believe

in. The legislature has a difficult time with this type amendment because there is generally a great deal of sympathy for a person to practice his religious beliefs as he sees fit. *OSMA does not approve this amendment.*

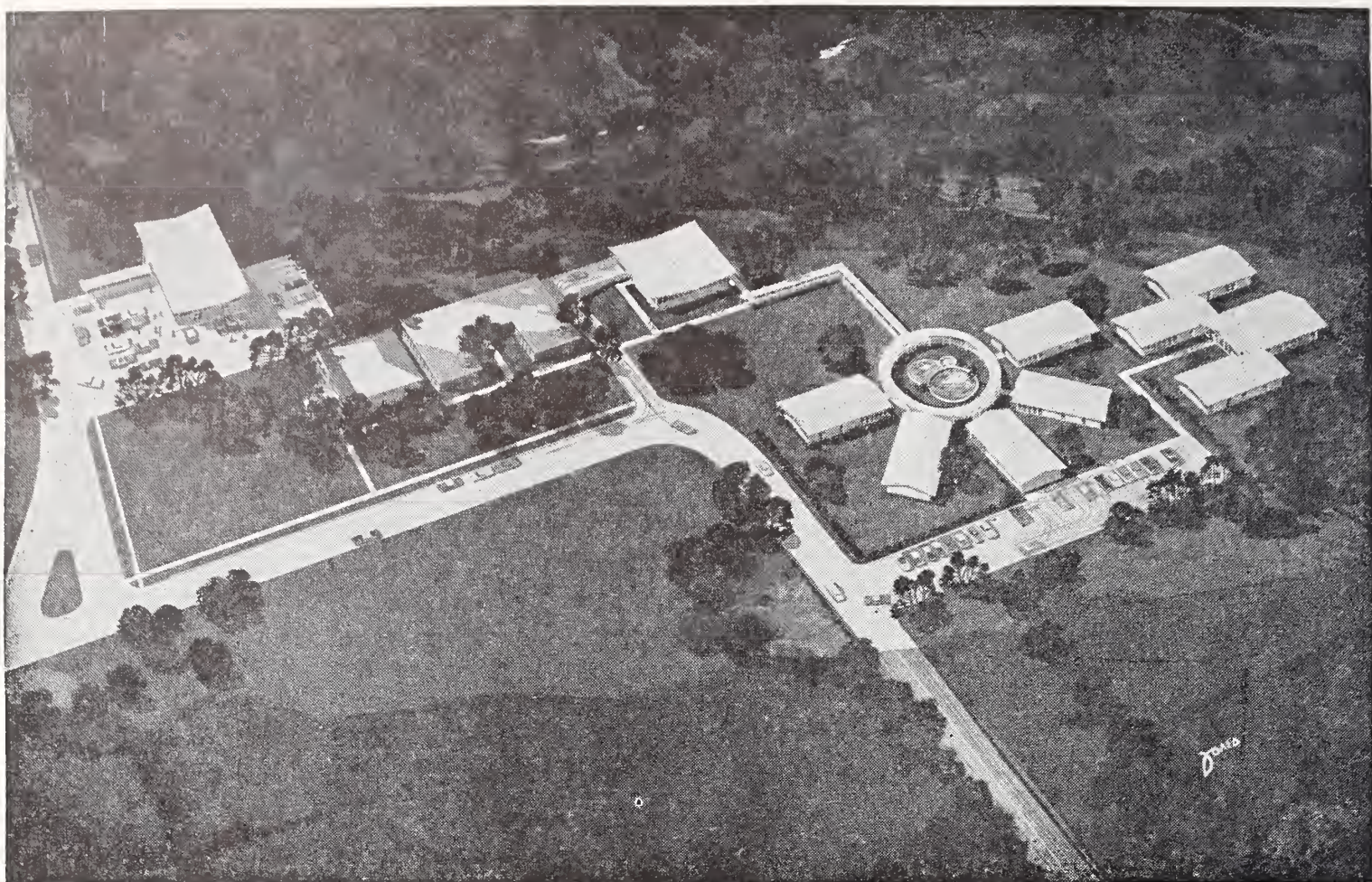
**House Bill 1144** by Derryberry, commonly called the Medical Panel Amendment, is another addition to the existing Workmen's Compensation Law. The Medical Panel Amendment provides for a panel to be selected by the Industrial Court from a list of physicians submitted by the Oklahoma State Medical Association. The purpose of the legislation is to provide a mechanism for a peer review of divergent medical testimony in Workmen's Compensation cases. *OSMA assisted in the drafting of this legislation and supports this bill.*

**House Bill 1150** by Derryberry is another amendment to the existing Workmen's Compensation Law. It is a waiver amendment, and gives an employee or a prospective employee who has a chronic ailment or disease the right to waive his compensable rights under Workmen's Compensation. The purpose of this act is to relieve the unnecessary risk to the employer associated with a person who has a chronic illness or disease. It is hoped that this amendment would allow some people to work who now would be unable to work because of medical disability. The bill properly protects the employee and provides that rights can only be waived after a medical examination and approval by the Industrial Court. *OSMA supports this bill.*

Other bills known to be introduced in the legislature that are currently being reviewed by the Legislative Committee are, a bill to require immunization of all the children entering school and a bill introduced to require that a registered pharmacist be placed on the State Board of Health.

These bills will be reviewed by the Legislative Committee and positions taken. □





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## OSMA Headquarters Expansion Underway

The architects for the expansion of the OSMA headquarters office in Oklahoma City are seeking bids for the construction of the approved expansion. At least six major construction firms are expected to bid on the job.

The architects, Nusbaum and Thomas, Architects and Engineers, expect that the construction should be completed in early fall.

The expansion of the OSMA office was approved by the House of Delegates during its May meeting. The House authorized the Board of Trustees to work out the final details on the expansion program.

The building expansion was originally recommended by the association's Committee on Planning. In their report to the May House of Delegates, the committee pointed out that the present building was constructed in 1956 to accommodate six staff employees and to provide meeting facilities for association councils and committees. There are presently eight staff personnel and the volume of activities is estimated to have doubled since the headquarters building was constructed.

In its report the committee stressed the fact that the problem of inadequate space exists in the areas of filing and record storage, workroom facilities, private office space for staff personnel, and conference rooms for growing numbers of physician meetings.

It is estimated that the entire project, including the addition of a basement to the building and an area to be leased by the Oklahoma County Medical Society for office space, will cost approximately \$72,000-75,000. This would add an additional 2,000 square feet of office space, 1,000 square feet of basement-storage space, and an additional 1,000 square feet of office space for the county society.

The addition of the basement altered the plans approved in May by the House of Delegates and a special House meeting was called in November. At that time the House voted that a basement should be included and that this portion of the project

should be financed entirely from the association's reserves.

The OSMA will make a cash down payment on the construction costs and a 15-year first mortgage will then be taken for the amount remaining. It is estimated that the mortgage will be approximately \$40,000 and that an additional \$10,000 will be needed to furnish and equip the new addition. It is expected that the Oklahoma County Medical Society lease will retire the mortgage.

The November meeting of the House, realizing that such a cash outlay would seriously deplete the association's reserves, authorized solicitation of voluntary contributions to offset the drain. This solicitation will be carried out in two ways. First, the dues statements that were sent out from the OSMA office included a provision whereby a physi-

cian-member could include a \$15 tax deductible contribution in his annual OSMA dues check. As of the end of January nearly one-half of the physicians that had renewed their membership had included the \$15 contribution. Many made higher contributions and a few have contributed as high as \$100.

As soon as the cost of equipping and furnishing the new portions of the building has been determined, a direct mail campaign will be carried out to seek additional contributions.

Without these contributions, the association's surplus funds would be depleted to less than \$15,000. Several members of the House of Delegates expressed concern over such a depletion. It was their feeling that the association should keep a larger surplus fund to meet the contingencies which may arise in the future. □

## DEATHS

J. RAYMOND HINSHAW, M.D.

1896-1969

A former, long-time Norman physician, J. Raymond Hinshaw, M.D., died in Rochester, New York, on January 17th, 1969. Born in Warrensburg, Missouri, Doctor Hinshaw graduated from the University of Oklahoma School of Medicine in 1921. He had practiced in McAlester, serving as the Pittsburg County Health Superintendent, in Clinton and Elk City, before moving to Norman in 1945.

Last year, Doctor Hinshaw was honored by the OSMA with the presentation of a Life Membership Certificate in recognition of his years of devoted service to his profession and the public.

LEON H. STUART, M.D.

1887-1969

A retired Tulsa physician, Leon H. Stuart, M.D., died January 5th, 1969, in Los Angeles. Doctor Stuart, a radiologist, practiced in Tulsa for nearly 40 years before moving to LaCanada, California, about two years ago.

A native of Meadville, Pennsylvania, he graduated from Western Reserve University School of Medicine in Cleveland in 1917. He was a member of the Alpha Kappa Kappa and various medical and radiological societies.

In 1961, Doctor Stuart was presented a Life Membership in the Oklahoma State Medical Association.

J. NEILL LYSAUGHT, M.D.

1920-1969

A former Oklahoma City pediatrician, J. Neill Lysaught, M.D., died in Prairie Village, Kansas, January 13th, 1969. A native of Kansas City, Missouri, Doctor Lysaught was graduated from the University of Kansas School of Medicine in 1944. He practiced in Oklahoma City from 1949 until 1963. In 1965, he was Clinical Director of The Hissom Memorial Center in Sand Springs, Oklahoma. At the time of his death, he was practicing in Centralia, Illinois.

Doctor Lysaught was certified by the American Board of Pediatrics and a member of the American Academy of Pediatrics. □



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## Tulsa Medical School Not Recommended Now

Booz-Allen and Hamilton, management consultants hired to study the feasibility of a medical school in the Tulsa area, have released their report and recommended that a medical school in Tulsa not be considered at this time. The study was commissioned by the Oklahoma Regents for Higher Education in response to a legislative demand and was conducted with financial and other cooperation from the Tulsa County Medical Society and the Tulsa Chamber of Commerce.

In a final report session given on Monday, January 27th, the consulting firm stated, "The most economical and expeditious alternative (to establishing a new medical school) available to increase the number of physicians in Oklahoma is to enlarge the freshman enrollment at the present medical school to 200 on a time-phased basis through 1975." In another portion of the report it stated, "The Tulsa area offers many resources necessary to support medical education. However, at the present time it does not appear feasible to establish a new state medical school. While there are several significant indications that the Tulsa area could adequately support a medical school in the near future, it is concluded that physician manpower needs in Oklahoma can be met more efficiently, more economically, and more rapidly by expanding present facilities and strengthening graduate medical education programs in the state."

The report went on to state that it should be noted that the Tulsa area is the most logical location in Oklahoma for the establishment of a second medical school when it becomes feasible. It also made several recommendations for actions to be taken in the Tulsa area to prepare for such an eventuality.

In an in-depth analysis of physician manpower in Oklahoma the report stated that there are several methods to reduce a physician shortage and to prevent a critical shortage later on. This could be done through expanding medical school enrollment,

enlarging medical education opportunities, improving continuing education programs for physicians, reducing the number of physicians who leave the state, and reducing the number of physicians who enter related fields or other nonpracticing areas.

The first factor, expansion of medical school enrollment, was broken down into three approaches. It could be realized by (1) establishing a new medical school, (2) increasing enrollment at the present school, or (3) a combination of both of these approaches.

In regard to establishing a new medical school, the report pointed out that using present average construction costs for a new medical school, including the three basic elements of (1) the basic science building, (2) the clinical science building, (3) the teaching hospital, the total cost of a new medical school would be approximately \$36 million.

Taking into consideration the fact that three hospitals already exist in the Tulsa area, the report stated that it would be necessary for them to have extensive renovation or additions to adequately meet the requirements of a medical school teaching hospital. It is estimated that a 500-bed teaching hospital would cost \$19 million and that this figure could be reduced by approximately \$5 million by renovating present hospitals. This would reduce the total estimated cost of a medical school in the Tulsa area to \$21.5 million. However, this figure assumes that a site would be available at no cost.

"Assuming that federal government programs would provide 50 per cent or about \$11 million of the cost for establishing a new medical school in Tulsa, there then would be a state obligation to provide the remaining \$10.5 million," the report stated. "In addition to initial construction costs, the state of Oklahoma would be responsible for providing annual operating funds of between \$3-5 million, approximately half of which could be provided by income from federal and private research grants and contracts."

Concluding it is generally accepted that 12 to 15 years are required by a

new medical school to produce a practicing physician, the management consultants stated, "An expanded program at the present school could produce more practicing physicians in approximately half the time."

This recommendation provides the state with a practical plan that offers several significant advantages over other immediate plans, according to the report. Some of these advantages are: additional graduates can be produced in a relatively short period of time, financial outlay would be considerably less for both capital and operating requirements, and unnecessary competition for faculty members could be avoided.

The essential recommendation of the report was that immediate planning should begin to provide for expansion of freshmen enrollment at two-year intervals at the present medical school. This called for 125 freshmen to enter the school in 1969, 150 in 1971, 175 in 1973, and 200 by the year 1975. The report went on to recommend that, if at all possible, a more rapid expansion should occur to reach the 200 level prior to 1975.

The final report of Booz-Allen and Hamilton will be presented to the Oklahoma Legislature for its consideration. □

## Osteopathic Report Stirs Controversy

Report S of the AMA House of Delegates dealing with the subject of osteopathy has met strong opposition from the osteopathic organizations. The report outlined the objectives of the AMA and the methodology to be used to "bring about an eventual amalgamation of osteopathy with medicine."

Immediately after the report was adopted by the AMA House, Roy S. Young, D.O., President of the American Osteopathic Association, condemned it in the strongest possible language. The AOA's executive staff and the editor of their journal have also publicly condemned the report.

Even though there has been no official action, it is known that the Oklahoma Osteopathic Association's



State Board is opposed to the report.

While leaving implementation of the report up to state and county societies and other affected organizations, it does make specific recommendations as to methodology to achieve the ultimate amalgamation of medicine and osteopathy. It recommends that each school of osteopathy improve its teaching program by strengthening its faculty and improving its facilities and resources, and that such schools and the agencies which accredit them consult with the AMA and the liaison committee of the Council on Medical Education and the Association of American Medical Colleges.

Recommendation No. 3 is of particular importance to the medical profession since it calls for accredited hospitals to accept "qualified osteopaths for appointment to the medical staffs . . . ." This is followed by a recommendation that state and county societies accept qualified osteopaths as "active members and thereby provide for their membership in the American Medical Association."

Recommendation No. 7 "suggests that AMA-approved internships may be opened to qualified graduates of schools of osteopathy," while Recommendation No. 6, "requests that as (medical) specialty boards declare intent to permit examination of osteopathic graduates, appropriate AMA-approved residency programs be opened to qualified graduates of schools of osteopathy."

This latter recommendation was preceded by a suggestion that each of the American Boards for medical specialties accept for examination those osteopaths who have completed AMA-approved internships and residency programs and have met the other regular requirements applicable to all board candidates.

One objective of the report is to "provide avenues whereby qualified osteopaths may be assimilated into the mainstream of medicine."

In 1965, the AMA ruled that it was no longer unethical for medical doctors to associate professionally with osteopaths who practiced according

to scientific principles. However, implementation was left to the constituent societies of the AMA.

The OSMA House of Delegates reacted to the AMA stand in 1966 by making it possible for county medical societies to "recognize" certain osteopaths for professional fraternization, based upon clearly defined stipulations as to their adherence to scientific principles and their known ethical conduct. Moreover, the OSMA policy statement provided that the state association would maintain and distribute annually a roster of recognized osteopaths.

The OSMA policy statement disenfranchised even "recognized" osteopaths from membership in organized medicine, and further stipulated that hospital staff privileges were within the province of the medical staffs and boards of control of individual hospitals.

OSMA's permissive program to recognize osteopaths was largely ignored by the county medical societies in Oklahoma. In three years, only a handful of county organizations have implemented the plan and the total of "recognized" osteopaths amounts to less than twenty.

With regard to osteopaths serving on the staffs of medical hospitals, at the current time there are approximately 160 licensed hospitals in the state and osteopaths are serving as staff members on about 20 of them. Staff privileges, in most of these cases, were gained through lawsuits or the threat of lawsuits.

The State Board of Osteopathy requires a one-year internship before the D.O. license can be conferred. At the present time the internship must be served in a qualified osteopathic hospital. Even if accredited medical hospitals in the state opened their internship programs to qualified osteopaths it is unlikely that the State Board of Osteopathy would accept them as equivalent for licensure.

Several American specialty boards have expressed their willingness to accept osteopaths into their residency programs. Since residency training is not a requirement for licensure as an osteopath in Oklahoma, it might be possible for a D.O. to be a board certified medical specialist. How-

ever, the methodology of Report S suggests that the various boards accept for examination only those osteopaths who have completed AMA-approved internships as well as residency programs. Unless an osteopath is willing to serve a double internship, one osteopathic and one medical, it is unlikely he could qualify for residency training in a medical specialty.

The body of Report S stated, "Variation in the individual states in respect to licensing and/or other legal considerations will require individualized responses to the . . . general objectives and suggestions for methodology." The report then ended with Recommendation No. 9 stating, "that AMA, state and county societies and other affected organizations may proceed to make such constitution and bylaws changes as are necessary to implement" the objectives and methodology of the report. □

## 80 Physicians and Wives Attend Statewide Conference on Legislation

Physicians and their wives attended a leadership conference on state legislation January 19th in Oklahoma City.

After short talks on the physician's role in legislation, OSMA's role and the techniques of lobbying, Lee Cate, Representative from Norman, explained the "nuts and bolts" of handling a bill in the legislature.

The following bills were discussed and positions reported:

HB 1020 — Psychologists Repeal — Deferred action.

HB 1022—Medical Laboratory Licensure—Supports.

HB 1033—Public Health Appropriations—Supports as amended.

HB 1047—Public Health Expansion of County Boards of Health—Supports as amended.

HB 1143—Treatment by Prayer or Spiritual Means for Workmen's Compensation Patients—Do not approve.

HB 1144—Medical Panel for Disputed Workmen's Compensation Cases—Supports.

HB 1150—Waiver of Compensation in Workmen's Compensation Cases—Supports. □



## BOOK REVIEWS

**SURGERY OF THE ADRENAL GLANDS.** Lawrence W. O'Neal, M.D., Assistant Professor of Clinical Surgery, Washington University School of Medicine. Cloth, 295 pp., with 212 illustrations. St. Louis: The C. V. Mosby Company, 1968. \$19.50.

In his preface, the author states that "This book is intended primarily for use by surgeons," who "must have a working knowledge of adrenal pathology and physiology and of the essential ways in which clinical and laboratory evaluation of the patient help differentiate between the non-surgical and surgical adrenal diseases and point the way to appropriate surgical operations."

The book is well organized, with introductory chapters on adrenal embryology and anatomy, adrenocortical hormones, and adrenal medullary and sympathetic nerve physiology. The next portion of the book is devoted to disease states for which adrenal surgery is indicated, including Cushing's syndrome, virilizing and feminizing states, primary aldosteronism, pheochromocytoma, breast cancer, and sympathetic tumors of the adrenal. The final portion of the book is a review of roentgenology of the adrenal glands, anesthetic management for adrenal surgery, preoperative and postoperative management, and surgical techniques of adrenalectomy.

The book is generously supplied with diagrams, charts, representative histologic and pathologic sections, photographs, and reproductions of X-ray studies. All chapters are extensively referenced. A helpful appendix of normal laboratory values, adjusted for age, is included.

Sections dealing with signs and symptoms, pathophysiology, and diagnostic procedures are not as critical or exhaustive as similar sections in standard texts on endocrinology. The chapter on operative technique is brief and does not describe all approaches to adrenalectomy. Use of additional references will be necessary for the reader

wishing an in depth review of these disease processes.

The book as a whole achieves a worthwhile purpose, however, for the physician or surgeon desiring a brief review of the broad spectrum of surgical diseases of the adrenal glands. —Donald B. Halverstadt, M.D.

### **HEALTH OF MANKIND. CIBA FOUNDATION 100th SYMPOSIUM.**

Edited by G. Wolstenholme and M. O'Connor. 297 pp. Little, Brown and Company, Boston, 1967. \$12.00

To celebrate its 100th symposium in March, 1967, the Ciba Foundation chose the subject of world health. This book contains the papers and discussions of that meeting held in London. Twenty-eight eminent spokesmen from various fields including medicine, science, law, architecture and engineering evaluate the status of mankind's health in these proceedings.

The book is divided into three major sections. The first, entitled "Assessment of the Present Health of Mankind," reviews such topics as the world incidence and prevalence of major communicable disease, maternal and child care, animal health and geographical pathology. The second major section entitled "Major Factors Aggregating World Health Problems," discusses such important topics as population growth and age composition, nutritional problems, air and water pollution and political limitations in health control. A particularly interesting section is the chapter entitled "The Human City," by C. A. Doxiadis of Athens, a renowned architect. The final section is concerned with manpower and education and in this section such problems as the numbers and distribution of physicians and health personnel, education and training facilities and their potentials are discussed. Wolstenholme outlines a proposal for a world health service.

As with all Ciba Symposium proceedings, this one is sprinkled liberally with discussions following each formal presentation.

All persons in the health professions, as well as educators and others will find this compilation well worth reading.—H. D. Riley, Jr., M.D.

**COMMUNICATION IN SCIENCE: DOCUMENTATION AND AUTOMATION.** Edited by A. De Reuck and J. Knight. 274 pp. Little, Brown and Company, Boston, 1967. \$12.50.

Communication in science was the subject of a symposium convened in November, 1966, by the Ciba Foundation for the promotion of international cooperation in medical and chemical research in London. The major topic of the conference was the handling of scientific information and the development of automation techniques. The symposium featured 24 participants experienced in the field of science communication. Participants from the United States included Dr. Martin M. Cummings, Director, National Library of Medicine and formerly a member of the faculty of the University of Oklahoma School of Medicine.

The book is divided into 12 chapters. Its content is far ranging. The future impact of computers as information processors is discussed. Consideration is given to a worldwide network of communication satellites that would transmit data across oceans with speed and clarity. The need for a national information policy is stressed and for government support of services for storing, retrieving and supplying scientific and technical information.

This book will not be of general interest but is an excellent reference for those concerned with scientific communication and the "information explosion."—H. D. Riley, Jr., M.D.

**ATLAS OF EAR SURGERY.** William H. Saunders, M.D., and Michael M. Paparella, M.D. 363 pp., with 163 illustrations. St. Louis: The C. V. Mosby Company, 1968. \$27.50.

This atlas begins with an extremely interesting and complete historical outline of the development of otology. This outline affords the reader a



concise chronology of the specialty.

This volume is of particular value to the otologic surgeon in training as it includes a detailed description of the method of laboratory dissection of the temporal bone along with specific surgical dissections clearly illustrated. The inclusion of a chapter on the preoperative, operative and postoperative care of the patient adds to the complete coverage of the surgical treatment of the patient but is very limited in its scope. This short chapter is the only subject incompletely covered in this atlas.

The remainder of the volume is concerned with detailed descriptions of all facets of otologic surgery. The broad coverage includes surgery for chronic ear disease, cosmetic surgery, surgery for conductive deafness, surgery for Meniere's disease and surgery of the facial nerve. The diagrams are anatomically accurate and well labeled. The procedures described include the most recent advancements in the field.

The volume will be of particular value to the trainee, but all practitioners of otologic surgery will find this atlas of interest in view of its up to date coverage of the discipline.  
—Hector J. Seda, M.D.

## Ophthalmologists and Otolaryngologists to Meet

The Annual Spring Meeting of the Oklahoma City Academy of Ophthalmology and Otolaryngology will be held at the OU School of Medicine, March 20th and 21st.

The two-day meeting will feature guest speakers: Byron J. Bailey, M.D., University of Texas Medical Center; Michael M. Paparella, M.D., University of Minnesota School of Medicine; William F. Hughes, M.D., University of Illinois College of Medicine; and, Peter C. Kronfeld, M.D., University of Illinois College of Medicine.

Registration fee, which may be mailed to the University of Oklahoma Medical Center Postgraduate Office, is \$45. This fee includes a social hour and dinner on Thursday evening, March 20th. □

PHYSICIAN, AGE 36, rotating internship, board eligible in internal medicine, six years private practice, seeking association with established physician or group in Oklahoma City or Norman area. Write Harold Berliner, M.D., 1320 N.E. 55th Street, Oklahoma City, Oklahoma or phone in the evening, 405 427-6711.

M.D. WISHES WORK in private practice, clinic or institution. Full, part time or relief work. Contact Key A, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City, Oklahoma 73118.

RECENTLY COMPLETED CLINIC space allows us to expand services. If you are an internist, general practitioner, urologist, orthopedist, ophthalmologist, otolaryngologist, or clinical psychologist, we invite you to investigate this lengthening practice opportunity. Write or call Robert E. Herndon, M.D., Chief of Clinic Staff, Box 1069, Chickasha, Oklahoma 73018.

PHYSICIAN, to work in our five-man Industrial Department, one-year residency required. Contact Glass-Nelson Clinic, 2020 South Xanthus, Tulsa, Oklahoma.

FAMILY SERVICE DOCTOR to locate in Ringling, Oklahoma. Population 1,500, trade area 3,000. Eight room, remodeled, centrally heated and cooled clinic furnished free of rent. Wonderful opportunity to be of service and prosper financially. Call collect 405 662-2364.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four-year program in anatomical and clinical pathology. Average annual specimens and tests—\$48,587. Interns—\$6300; residents—\$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

FOR LEASE: Office suitable for internist, surgeon or general practitioner. Maintenance services included. Call 478-2567 or WI 6-5678 if interested.

ANESTHESIOLOGY RESIDENCIES available—Fully approved two-year program in 600-bed general hospital includes neurosurgery, thoracic, and cardiovascular surgery. Annual anesthetics administered—over 13,000. Stipend—\$8100 and \$9300. Board and laundry. A. N. Heinrichs, M.D., Director, Department of Anesthesia, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

OBSTETRIC AND GYNECOLOGY SPECIALIST desires association or group practice in the Tulsa area beginning August 6th, 1969. Graduate of Baylor College of Medicine in 1963; residency at Texas Medical Center; completing military obligations. Contact R. Bryan Boatright, M.D., 6 C Cunningham Street, Westover Air Force Base, Massachusetts. Phone 413 557-7251 or 413 593-5258.

WANTED: GENERALIST to take over established practice. This is a fully equipped clinic, fine hospital one mile. Records available. We offer small town living at its best, close to outdoor recreation, right in the heart of wealthy wheat and cattle country. Housing is available. This is an opportunity for a rapid start and a desirable practice is assured. Reasonably priced and immediate possession possible. Contact Key T, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

TWO INTERNISTS—Board eligible or certified, wanted by multi-specialty group in Central Texas associated with 100-bed hospital; \$20 — \$24,000 annual salary; early partnership; no investment. Write G. H. Wahle, Jr., M.D., King's Daughters Clinic, Temple, Texas, or call collect 817 778-5501. □



# **THE GREAT DOCTORS ACCORDING TO 1,900 TEENAGERS**

The Great Doctors, according to 1,900 teenagers, are the Doctors of Medicine who have spoken as a panel to the Teen Sitters Workshop presented by the Woman's Auxiliary to the Oklahoma County Medical Society.

The panel of speakers has been somewhat changed for each of the presentations during the period of November 1967 to 1968. The Great Doctor evaluation by the participants has sustained the program. The teenagers were expecting the "talks," however, perhaps the "listening" has formed their concept of really Great Doctors. An equal amount of time is given to "listening" in the form of a Question and Answer panel, which has excluded the medical profession from the communication gap that is so loudly proclaimed in other areas.

Questions—teenagers have; Answers—the Great Doctors give.

Medical knowledge and depth of compassionate involvement in the process of serving is the make-up of the Great Doctor. The unsung step-after-step along the hospital corridor; the unsung pen-in-hand for prescriptions—the telephone guidance—the unsung concern as the laboratory reports show a change of direction in the medical treatment; the unsung hand that put the ignition key in the car to start home is the unsung hand that answers the telephone again to

(hopefully) assure the relative or patient that all is well.

The M.D.-panel-moderator states, "Now Doctor, here is a question that I will be listening to learn the answer, 'What do you do when children just won't mind?'" The further "listening" tells about the vase that was broken to the dismay of the parent-employer and it happened when the four-year-old cracked it over the SITTER'S head, as he sneaked from behind while she was changing the baby.

The question of what to do when the child has locked itself in the bathroom and then you find several medical containers scattered about the floor; and what about the stranger at the door who says he is "uncle" and the children do not think so? There is the Great Doctor who said, "It was my brother, and their favorite uncle, and he sat in his car until we came home and the sitter was absolutely right in not opening the door." The Great Doctor usually has children, too.

The topics covered are "Big Worries: Fire, Water, Weather," "Care and Treatment of Poison and People," and "Y-O-U-Decision Maker." Evidence of community participation in the Teen Sitters Workshop is the talk "Teen Sitters Tips" presented by a Federal Bureau of Investigation speaker.

The GREAT DOCTORS? Medical Auxiliary Members, there are 1,900 teenagers who say that they are our husbands!

*Mrs. Charles Bodine*



The Oklahoma Nursing Home Association is feeling the bind of rising costs and a fixed income for Welfare Department clientele. A sub-group of the DPW's Advisory Committee on Medical Care for Public Assistance Recipients reported on January 17th that the operational costs of nursing homes during the period February 1st, 1967 to February 1st, 1969 have risen about \$41 per month per patient. The study committee based its analysis on a sample of 20 homes. It drew no conclusion, however, that the present \$251 monthly payment per patient was inadequate. Nursing homes have not had an adjustment in their pay scale since 1967.

**Building fund contributions gratifying.** The OSMA office reports that substantial numbers of association members are voluntarily paying the \$15.00 building fund item which is included on the 1969 dues statement. The contributions were authorized by the House of Delegates to offset the drain on OSMA surplus funds which will be required by the expansion of the state headquarters building. The expanded facility will include new conference rooms, private offices, larger printing and filing rooms, a basement storage area, and leased office space for the Oklahoma County Medical Society. Revamping of the 12-year-old building will start in March.

**The federal government is quick to tell taxpayers how to run their business, but receives poor marks in minding its own.** The General Accounting Office—watchdog of federal fiscal affairs—examined 13 departments and nine agencies in 1968. As a result, nearly a quarter of a billion dollars was saved by corrective action.

**Doctor Rex E. Kenyon, former OSMA president,** has been named to the Physician Advisory Board of the American Association of Medical Assistants.

**NYC welfare costs more than Norway's National Budget.** During the last fiscal year, New York City spent \$3.6 billion on welfare, while Norway operated its entire country on \$1.8 billion. Over one million New Yorkers are currently on relief.

**Thirty-one U.S. Senators introduce Medicare drug bill.** On January 27th, Senator Montoya of New Mexico and thirty other Senators introduced Senate Bill 763 which provides for the inclusion of prescription drugs as a benefit of Medicare's Part B. The bill covers out-of-hospital prescription drugs subject to a \$25 deductible. Drugs to be included: Those contained in a formulary established by a three-man HEW Formulary Committee, two members of which have to be physicians. Payment would be based on an allowable benefit established by the committee to reflect the acquisition cost of the ultimate dispenser plus, in the case of a community pharmacy, a reasonable fee to recover the cost of overhead, professional services, and a "fair profit."

**The U.S. House Ways and Means Committee** will begin hearings on February 18th as to whether the Internal Revenue Service has the right to tax the advertising profits derived by tax-exempt corporations on publications containing editorial content related to the purpose of such corporations. OSMA's Journal is involved, and unless IRS is reversed by Congress, the association will have to begin filing tax returns.

## MEETINGS:

**March 23-25, 1969** — Oklahoma Academy of General Practice, Sheraton-Oklahoma Hotel, Oklahoma City.

**May 15-17, 1969** — OSMA Annual Meeting, Assembly Center, Tulsa.

**July 13-17, 1969** — AMA Annual Meeting, New York City. □



of the Oklahoma State Medical Association  
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## *Immunizations: An Overview for Oklahoma*

SINCE ITS INCEPTION the medical profession has sought for methods to prevent disease. No one will debate that fact that it is much cheaper and easier to prevent a disease than to treat that disease once it has become apparent. Immunization has long been the prime factor in the medical armamentarium against infectious diseases. At the present time both private and public health areas of medical practice are exploring the possibility of preventing disease through more effective immunization. In this issue of *The Journal* there are several articles devoted to the recommendations regarding current immunization practices. The Immunization Committee of the State Medical Association in cooperation with the Oklahoma State Health Department has recently updated its recommendations and they have been published and mailed to every physician in Oklahoma.

Immunizations have accomplished more toward prolonging life than any other single factor with the possible exception of antibiotics. It is impossible to assess the tremendous reduction in mortality and morbidity from diseases that are now prevented by immunization. The treatment of diseases like polio, diphtheria and tetanus is far from satisfactory. There is a fantastic saving in dollars and cents when diseases are prevented rather than treated.

All physicians are aware of the immunization schedule recommended for diphtheria, pertussis and tetanus. Recently it has become obvious that it is not necessary to give diphtheria-tetanus immunizations every four years. A single intramuscular injection of "adult DT" every *ten years*, following the primary immunization series given during infancy, and a booster at the beginning of school is entirely satisfactory. Prophylactic injections of tetanus toxoid given at the time of an injury, are not needed if a DT booster has been administered within the preceding year. The Immunization Committee would like to see all injury prophylaxis accomplished with "adult DT" instead of plain tetanus toxoid. The untoward reactions formerly encountered by using diphtheria

toxoid have been circumvented by a more highly purified, less toxic preparation.

It is no longer necessary to "start over" any immunization because there has been a prolonged delay between the doses of the immunizing agent. In fact, there is considerable data suggesting that the longer the interval between doses, the better the immune response. This is true for trivalent oral polio vaccines as well as DPT and adult D&T vaccines.

Immunization with killed virus measles vaccine has been abandoned. Very peculiar and poorly understood hypersensitivity phenomena have occurred in those subjects who were immunized with killed virus measles vaccine when they were exposed to the naturally occurring virus. At the present time, one of two agents can be used: (1) A single dose of further attenuated measles vaccine (Schwarz Strain), (2) Measles vaccine (Edmonston Strain) administered simultaneously with immune globulin.

The Immunization Committee recommends the use of trivalent oral polio vaccine as a single agent for the prevention of poliomyelitis. The use of killed virus (Salk) polio vaccine is no longer recommended.

Mumps vaccine has been available for approximately three years. The induced immunity has endured well and at the present time the public health services are advising the use of this vaccine in all susceptible individuals over twelve months of age. Live mumps virus vaccine is virtually devoid of side effects. Mumps vaccine should not be given simultaneously with other vaccines until the results of controlled, clinical investigations are available.

The medical profession and the communications media have been effective in educating the general population regarding the value of immunizations. Physicians, however, have not been aggressive in insisting that their adult patients maintain adequate immunization levels. Women over 40 years of age are the most tetanus-susceptible members of our population. Many of them have



never been immunized with diphtheria or tetanus toxoid. It behooves the physician to identify these individuals and challenge them to become immunized. He can utilize his office aides very effectively in the inquiry about the immunization status of patients coming to his office. Once the unimmunized individual has been identified, the physician can utilize his knowledge and influence in recommending appropriate methods for the accomplishment of immunization.

The Oklahoma State Health Department is committed not only to identification of unimmunized individuals in our state, but also to getting them immunized. Individuals who receive immunizations in a public health clinic are usually persons we physicians do not see in our offices. The issue of "free" immunizations is not a problem and does not compromise health department immunization practices. State and county health departments are willing and able to help every physician who wishes to protect the citizens of his community against the preventable infectious diseases.

As shown in table 1, there has been in the past ten years considerable reduction in the incidence of diseases for which vaccines have been available.

An effective and inexpensive method of determining the efficiency of combined private and public health efforts with regard to immunizing the population is the "first-grade school survey." The Epidemiology Division of the Oklahoma State Health Department conducted such a survey in 55 counties during the 1967 and 1968 school years. The impressive findings are summarized in table 2.

In summary, an extremely effective ar-

Table 2.

IMMUNIZATION LEVELS OF FIRST GRADE STUDENTS IN 55 COUNTIES OF OKLAHOMA

County	Percent Adequately Protected			
	Smallpox	Poliomyelitis	DPT	Measles <sup>1, 2</sup>
Alfalfa	72	65	85	85
Atoka	54	55	69	78
Beaver	68	66	84	82
Blaine	58	57	75	80
Caddo	61	60	78	89
Canadian	75	76	87	88
Carter	56	65	87	77
Choctaw	45	48	63	69
Coal	54	65	72	73
Craig	65	63	77	85
Creek	63	68	78	91
Custer	75	69	85	96
Dewey	62	71	82	92
Ellis	70	66	85	71
Garfield	65	78	82	90
Garvin	63	72	89	96
Grady	69	70	88	88
Grant	66	63	90	82
Greer	65	57	83	91
Harmon	46	62	78	93
Haskell	58	66	73	70
Hughes	44	57	76	73
Jackson	62	71	82	90
Jefferson	76	62	82	81
Kay	73	74	89	90
Kingfisher	64	74	88	86
Kiowa	65	74	82	84
LeFlore	62	64	64	87
Lincoln	75	64	80	98
Logan	57	71	77	88
McClain	59	63	82	79
McIntosh	64	71	77	84
Major	51	64	73	91
Marshall	51	45	65	69
Murray	55	66	85	75
Muskogee	61	72	80	88
Noble	69	63	84	82
Nowata	52	68	77	98
Okfuskee	57	61	71	95
Oklahoma	69	76	86	99

Table 1.

CASES REPORTED TO THE OKLAHOMA STATE HEALTH DEPARTMENT—1959-1968

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
polio	167	18	5	33	2	3	2	1	1	1
diphtheria	34	25	9	8	18	1	1	3	1	—
whooping cough	139	103	16	24	54	34	56	17	86	52
tetanus	4	7	5	4	8	4	4	3	4	—
measles*	—	—	—	—	—	—	—	—	3363	154

\*Accurate case reporting of measles was not accomplished until 1967. Measles vaccine was first distributed by the Oklahoma State Health Department during 1966.



Okmulgee	63	64	76	89
Pawnee	54	65	85	96
Pittsburg	51	62	79	96
Pontotoc	62	76	85	92
Pottawatomie	76	73	85	99
Pushmataha	45	44	70	67
Roger Mills	50	86	90	88
Rogers	75	75	84	78
Sequoyah	47	50	72	68
Texas	70	63	87	72
Tillman	40	44	63	71
Tulsa	75	78	89	99
Washita	78	74	86	97
Woods	72	70	87	94
Woodward	65	75	87	87

1. Some counties have held special immunization campaigns since these surveys were taken.
2. A level of 80 percent has been adopted as a minimum standard by the Oklahoma State Medical Association's Committee on Immunization.

mamentarium of vaccine is available for the prevention of certain infectious diseases.

Optimum use of these immunizing materials by both private and public health sectors of medical practice remains at a low level in Oklahoma as shown by first-grade school surveys. Maintenance of acceptable immunization levels will require: (1) A continuing, well-funded public health immunization program and, (2) an increase in the administration of immunizing materials by physicians in the private practice of medicine, whether they are engaged in general or specialty practice. □

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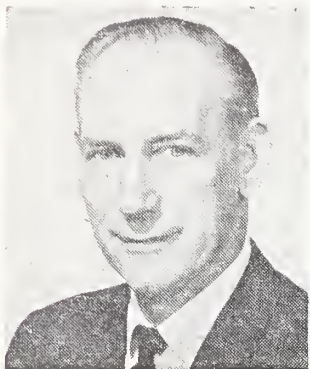
Armond Start, M.D.

## BEN H. NICHOLSON MEMORIAL LECTURESHIP

Robert A. Aldrich, M.D., Professor of Pediatrics and Director, Division of Human Ecology, University of Washington, Seattle, will give the first *Ben H. Nicholson Memorial Lecture* on Tuesday, May 8th, 1969, at 4:00 p.m., at the Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City. The lectureship has been established in memory of Ben H. Nicholson, M.D., long-time practicing pediatrician in Oklahoma City and faculty member since 1931, who died September 25th, 1968. All physicians are cordially invited to attend. Further details can be obtained from: The Postgraduate Office, University of Oklahoma Medical Center, Oklahoma City, Oklahoma 73104. □



## It's Fratricide



There is a new and attractive medical magazine on the national market — called *Private Practice*—and it features articles designed to inform physicians about the myriad dangers to their professional freedom. It is published by

the Congress of County Medical Societies.

The first issue contains an editorial entitled "It's Suicide." Editor Marvin Henry Edwards of Oklahoma City wrote this after attending a meeting of the Oklahoma State Medical Association on the subject of Comprehensive Health Planning.

His attack against the OSMA—which included statements that we "stacked" the meeting and "brainwashed" our members—was unwise, unfair and unwarranted.

First, the platform of CCMS has as one of its planks the goal of developing more effective communication between county and state medical associations. Vilification in a national magazine hardly meets this objective.

Secondly, Mr. Edwards missed the whole point of our meeting. The OSMA does not endorse Public Law 89-749, the federal program to require health planning, and we are just as apprehensive as anyone about the future controls against private practice which may result from this legislation. The

fact remains that this program is being implemented quite rapidly in Oklahoma, and it was because of this concern that a statewide meeting was held for our medical leaders.

The American Hospital Association has already adopted a policy which would enforce compulsory planning. In other words, authoritarian planning versus voluntary process planning.

Our mission was to inform physicians and to get them involved in regional advisory councils for the purpose of providing medical guidance and to perhaps avoid the future problems which we all fear. To excite the concern of our members, we arranged our program to provide for presentations from those with health planning experience and from those directly involved in P.L. 89-749. We are not opposed to voluntary health planning; nor can we direct our own destiny by remaining aloof to ongoing projects.

Our association has been defending the private practice of medicine since 1906 in hundreds of ways which far surpass this errant editorial. Editorial provocations against a brother medical association will not enhance our common objective to defend private practice from deleterious external forces.

Surely there must be a bigger threat to private practice in this nation than the OSMA.

It's fratricide! □

Sincerely yours,

*Scott Henderson, M.D.*



## Immunizations for the Traveler

R. LEROY CARPENTER, M.D.

*This article is a practical guide for the practicing physician whose patients travel abroad for either business or pleasure.*

**A**LONG WITH false teeth, door bells and telephones, one of the most popular products of the affluent society is foreign travel. In fact, if one studies the miles of annual foreign travel by Americans over the past ten years, the curve looks surprisingly steep with the peak, according to travel bureau experts, nowhere in sight.

Among the travelers you find an unusual array of professions represented, reasons for going and destinations. The ports-of-call are no longer limited to sea coast towns. A traveler can board an airplane at 7:00 a.m. in Oklahoma City and have supper in San Jose, Costa Rica, stopping for a 45 minute shopping tour in each of the crowded airports of Mexico City, Guatemala City, San

Salvador and Managua Nicaragua along the way.

If one conservatively calculates that the traveler exchanged air with a minimum of 50 people at each location where he stopped, he thus arrived at the Costa Rica-Hilton bearing respiratory viruses previously belonging to 300 people from no less than 20 different countries.

It takes a minimum amount of arithmetic to see how the potential disease exposure is compounded by military personnel, official business and government travelers and just plain tourists. Add to this the food and drink intake, swimming, boating and fishing in native waters, as well as some occasional intimate personal contact and you come up with an astronomical public health problem that would make even a computer cough.

To bring the subject down to specific cases in point, during the past two years there have been published reports of cases in the United States of traveler-borne outbreaks of polio, rabies, typhoid fever, malaria, plague, tuberculosis, hepatitis, echinococcus disease, filariasis, and the Hong Kong strain of Asian influenza.<sup>1</sup>

Most of the infectious disease problems



The Traveler / CARPENTER

that plague the peripatetic wanderers can be avoided through proper immunizations. Most of these immunizations are required by international quarantine regulations in order to obtain validated entrance visas to countries of destination. The regulations are clearly spelled out in the neat little booklet *Immunization for International Travel*<sup>2</sup> sold by the Superintendent of Documents, U. S. Government Printing Office for 40c. There are also leaflets containing information about numerous specific countries available from the same office.

The kinds of immunizations required depend entirely on where the traveler is going. First of all, one should be up to date on all the immunizations given routinely in this country; polio, diphtheria, tetanus, smallpox and the most recent influenza strains. Typhoid immunization is recommended for all foreign travelers, not because it prevents the disease but because it has been shown to reduce the number of complications and considerably lower death rate. Cholera, typhus, and yellow fever immunizations are usually required for travel in Asia, Africa

and South America; however, the traveler going to Europe rarely needs these unless he stops over in a country where the diseases are known to be endemic. A valid certificate of vaccination against smallpox is always required for entry into the United States from countries other than Canada, Mexico and a few nearby islands.<sup>3</sup>

The certificate pictured below must have:

- (1) The written signature of the physician under whose direction the vaccination was carried out.
- (2) The manufacturer and lot number of each vaccine administered.
- (3) A validation stamp of the local county or state health department.

Copies of the certificate of vaccination may be obtained through most county health departments, the Immunization Section of The State Health Department or the U. S. Government Printing Office.

RAPID METHOD FOR ADULT IMMUNIZATION<sup>4</sup>

Multiple immunizations with different vaccines ideally should be scheduled over a total period of two to three months to achieve maximum antibody effects and to

**INTERNATIONAL CERTIFICATE OF VACCINATION OR REVACCINATION AGAINST SMALLPOX**  
**CERTIFICAT INTERNATIONAL DE VACCINATION OU DE REVACCINATION CONTRE LA VARIOLE**

This is to certify that  
Je soussigné(e) certifie que  
whose signature follows  
dont la signature suit

Name of Vaccinee  
Signature of Vaccinee

sex  
sexe  
date of birth  
né(e) le

has on the date indicated been vaccinated or revaccinated against smallpox with a freeze-dried or liquid vaccine certified to fulfill the recommended requirements of the World Health Organization.  
a été vacciné(e) ou revacciné contre la variole à la date indiquée ci-dessous, avec un vaccin lyophilisé ou liquide certifié conforme aux normes recommandées par l'Organisation mondiale de la Santé.

Date	Show by "X" whether Indiquer par "X" s'il s'agit de	Signature, professional status, and address of vaccinator Signature, qualité professionnelle, et adresse du vaccinateur	Origin and batch no. of vaccine Origine du vaccin et numéro du lot	Approved stamp Cochet d'authentification
1a	Primary vaccination performed Primovaccination effectuée	Must be written signature of physician.	Manufacturer and Lot No.	Available at local health depts.
1b	Read as successful Prise Unsuccessful Pas de prise			

THE VALIDITY OF THIS CERTIFICATE shall extend for a period of 3 years, beginning 8 days after the date of a successful primary vaccination\* or, in the event of a revaccination, on the date of that revaccination.  
The approved stamp mentioned above must be in a form prescribed by the health administration of the country in which the vaccination is performed.  
Any amendment of this certificate, or erasure, or failure to complete any part of it, may render it invalid.

U.S.P.H.S. Publication No. 731  
Available from: Superintendent of Documents  
Government Printing Office  
Washington, D. C. 10¢ each



minimize patient discomfort. However, such scheduling is always difficult and for international travel usually is made more so by the patient's failure to arrange for his immunizations far enough in advance of his departure date. It is advisable to complete all injections except gamma globulin about one month before departure from the country.

The following rapid schedule may serve as a guide if time does not permit a more leisurely optimum schedule:

- |          |   |
|----------|---|
| 1st day  | Yellow fever.   |
| 2nd day  | a) First typhoid or booster.                                  |
|          | b) First tetanus or diphtheria-tetanus, or booster of either. |
| 4th day  | First cholera or booster.                                     |
| 6th day  | First typhus or booster.                                      |
| 9th day  | Smallpox.   |
| 11th day | Second and final cholera.                                     |
| 13th day | a) Second and final typhus.                                   |
|          | b) Inspect smallpox reaction if not to be done on 16th day.   |
| 16th day | Inspect smallpox reaction if not done on 13th day.            |
| 30th day | a) Second and final typhoid.                                  |
|          | b) Second and final tetanus or diphtheria-tetanus.            |

As close to embarkation time as possible:

Gamma Globulin for infectious hepatitis.

Other vaccines can be worked into this schedule as needed. They often can be completed abroad. The schedule of specific days is certainly not a rigid one and can be shortened or expanded (within limits) to accommodate both physician and patient. It is important that the recommended interval between immunizations of the same series not

be shortened, although it can be extended considerably. Another principle is that fever-producing vaccines and live virus vaccines should not be given simultaneously if avoidable. Injections given the same day or within several days should be in different extremities.<sup>4</sup>

#### THINGS FOR WHICH IMMUNIZATIONS ARE NOT AVAILABLE

A specific hepatitis vaccine is not yet perfected. Gamma globulin is recommended by most authorities for travelers going into areas of likely exposure. The recommended dose ranges from 0.02 to 0.06 ml./kg. body weight. For prolonged exposure the dose should be repeated in five months; however, after a year of intensive exposure subclinical infections usually occur and additional passive protection is not needed.

Diarrheas of various origins seem to plague the foreign traveler despite immunizations and "prophylactic" medication. Several good studies have been carried out which indicate chemical or viral origin. Pathogenic *E. coli*, *Salmonella* and *Shigella* have been implicated in scattered instances.

Of course, trench mouth, amebiasis, fungal skin infections, sunburn, and venereal diseases continue to elude the very best immunization armamentarium the physician can muster for the traveler.

For information on what vaccines are available at local public health departments and where and when clinics are held, one should call the specific county medical director or the Immunization Section, Oklahoma State Health Department. □

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*R. LeRoy Carpenter, M.D., graduated from the University of Kansas School of Medicine in 1956 and is now Assistant Professor of Internal Medicine, Preventive Medicine and Public Health at the University of Oklahoma School of Medicine. He is a Consultant to the U.S.P.H.S. Office of International Research. His medical affiliations include the American Public Health Association, the American Thoracic Society, the Mexican-American Border Health Association and the Organization of State and Territorial Epidemiologists.*

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3400 N. Eastern, Oklahoma City, Oklahoma



# Poliomyelitis Immunization: 1969

JOHN C. KRAMER, M.D.

*Trivalent oral polio vaccine (Sabin) is an immensely safe, effective agent, easily administered and available with relatively few precautions and problems. The under 18 population should be 100 percent immunized and isn't despite mass programs five to six years ago.*

**S**MALLPOX, bubonic, and pneumonic plagues are no longer present in nations with good health standards. Poliomyelitis has almost disappeared from the medical arena in the more highly developed countries of the world.

The peak year of poliomyelitis in the United States was 1952 when 57,879 cases were reported. By 1961, the use of killed polio virus vaccine had reduced this to 1,312 cases and polio was no longer a major public health problem. However, at that time, almost 25 percent of the cases of poliomyelitis were occurring in fully immunized individuals who had received as many as three doses of the killed virus vaccine. It became apparent to virologists that this agent, namely the killed polio virus vaccine, was not the answer to the complete eradication of poliomyelitis. In some cases, it ap-

peared as if the infection were being spread by immunized individuals.

With the knowledge that clinical polio was caused by three antigenic types of the virus and that natural illness seemed to cause persistent antibodies and resistance to reinfection with the same type, the feasibility of a more permanent vaccine, live but attenuated, was apparent. In 1961-62, oral polio vaccine was produced and distributed widely in mass programs and through individual physicians and health departments. By 1965, the reported cases of polio had fallen to 72. Oral polio vaccine had successfully replaced the inactivated polio virus vaccine.

Except for patients on steroids, anti-metabolites, and others in whom live virus immunization might be hazardous, the advantages of the oral polio vaccine are overpowering: (1) The vaccine can be given orally by less skilled personnel. (2) It stimulates a natural infection with persistent antibodies and greater resistance to reinfection. (3) Oral polio vaccine prevents the spread of "wild type polio virus" and promotes the spread of "vaccine type

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virus" through vaccinating not only the individual but some of his contacts. (4) After an original series with trivalent oral polio vaccine of two doses administered eight weeks or more apart and a booster dose six to twelve months or more later, no further boosters seem to be needed. However, an additional feeding of oral polio virus is recommended in instances of increased risk—foreign travel, exposure, etc.—and at school age, because of the possibility of human error or virus interference with one of the three previous doses. Virus interference appears to have a five percent or less incidence. (Interference occurs in the newborn period when 40 percent of doses of oral polio virus will be inactivated by breast milk and amniotic fluid.) (5) Trivalent oral polio vaccines can be stored\* and stocked as a single immunizing agent. Although monovalent oral polio vaccines can be given, the inconvenience of stocking several different types and the increased possibility of introducing human error indicate that the trivalent preparation is certainly easier to handle. There is no evidence indicating a significant difference between the eventual immunologic state of an individual whether he is immunized with the monovalent or the trivalent vaccines.

The safety of the oral polio virus vaccines cannot be questioned. It is currently among the safest of all vaccines. The most recent calculation of risk is less than one paralytic case per million doses. In 1967, out of 41\*\* paralytic cases, seven were felt possibly related to the vaccine. Current recommendations suggest that the vaccine need not be used above age 18 except in instances of increased risk, because the incidence of the disease in adults is equal to or less than the vaccine associated disease.

\*Must be kept frozen to preserve virus but is stable unfrozen—but refrigerated for one week.

\*\*Includes two cases apparently adequately immunized with oral polio vaccine.

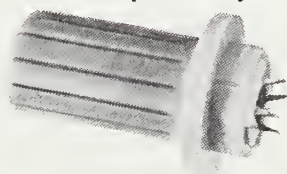
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# Mumps (Epidemic Parotitis)

JOE T. BLEDSOE, M.D.

*Mumps, formerly thought to be a benign disease, is accompanied frequently by potentially disabling complications which are now preventable by a safe, effective vaccine.*

**M**UMPS IS an acute, viral, contagious disease caused by myxovirus parotiditis. As known by all, it is commonly characterized by salivary gland enlargement. Unappreciated by most, it is frequently complicated by the following severe sequelae:

Epididymo-orchitis, the second most common manifestation of mumps infection, usually follows parotitis but may precede it or occur as an isolated manifestation of mumps. Unilateral involvement occurs in 20 to 30 percent of the males who develop the disease after puberty. Bilateral involvement occurs in only approximately two percent.

Meningoencephalitis is recognized clinically in approximately ten percent of all clinical cases of mumps. It may be the presenting clinical symptom of a mumps virus infection. Recently, during an outbreak of encephalitis in Central Oklahoma, the mumps virus was incriminated in approximately 50

percent of the cases studied. Fortunately, sequelae are rare following mumps meningoencephalitis. However, the time lost from school, jobs, etc. is generally prolonged, two to six weeks.

Pancreatitis and oophoritis are severe but rare complications of mumps. Again, most affected individuals escape without permanent residual damage.

Auditory neuritis with permanent hearing loss on the affected side has been estimated to occur in one to four percent of all clinical cases of mumps. Other even less common neurological sequelae are facial neuritis, myelitis, and post-infectious encephalitis.

Myocarditis, as determined by electrocardiography, is a complication that has been reported in as many as 15 percent of mumps infections. Rarely, pericarditis may occur.

The above list of mumps sequelae in itself presents a formidable list which makes the

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average practitioner wish for an effective vaccine. One is now available.

Passive immunity has not been of value. Ordinary gamma globulin is totally ineffective. Mumps-immune globulin is available, but it is both expensive and probably totally ineffective.

Active immunization was first attempted clinically with an inactivated mumps virus vaccine, available since the 1950's. It may induce serologic response in two to four weeks. However, the immunity is transient. It must be stated that the inactivated mumps virus vaccine is not recommended at the present time.

In 1968, a live attenuated mumps virus vaccine became available for use by the clinician. This vaccine is highly effective with greater than a 95 percent seroconversion rate in adults, children and infants. In one series of over 6,000 immunizations no reactions to the vaccine were noted. Therefore, it can be stated that a highly effective and safe mumps vaccine is now available to the clinician. The antibody levels produced by the live attenuated mumps virus vaccine have persisted at satisfactory levels for several years so that a prolonged or perhaps "permanent" immunity can be expected.

Who should be vaccinated? Currently there

are varied opinions about who should be vaccinated. All agree that the following persons should receive the live-attenuated virus mumps vaccine if they have not had clinical mumps:

- a. Adolescent and adult males
- b. Boys approaching puberty
- c. Children living in closed institutions, in summer camps (perhaps), or under other similar epidemiological circumstances.

Some authorities are recommending that all individuals over the age of one year, who have not had mumps, should receive the vaccine. This liberal recommendation for the use of the live attenuated virus mumps vaccine is based on the prolonged elevation of measurable mumps antibodies following vaccination. The final period of adequate protection and the possibility that a booster will be necessary is unknown at the present. Only time will tell as it did in the case of live virus polio vaccine. □

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# Immunization Against Diphtheria, Pertussis and Tetanus

BASIC IMMUNIZATION

THOMAS RUBIO, M.D.\*

*Immunization, when done properly, is one of the better and cheaper ways of preventing disease. Despite the availability of very effective immunizing agents, large numbers of children in this country continue with low rates of immunization; consequently several outbreaks of diphtheria and pertussis have recently occurred. A continued effort to properly immunize all children might eradicate these diseases or decrease them to a minimum in our communities.*

IT IS THE PURPOSE of this article to review the current concepts in immunization against diphtheria, tetanus and pertussis. In children, the vaccination against these three diseases is done simultaneously. There are several well established commercial preparations available that combine the diphtheria and tetanus toxoids, together with the killed *Bordetella pertussis* organisms (DPT vaccine). It is current practice to initiate the basic immunizations early in infancy with injections of the combined three antigens. Tetanus as well as a combination of diphtheria and tetanus vaccines are also available for maintenance of the immunity as well as for a booster effect.<sup>1, 2</sup>

The immunization against diphtheria, tetanus and pertussis may be started at any age; however, it has been recommended that the first injection be given between the second and third month of life. Injections given earlier are not very effective, particularly for diphtheria, because the presence of transplacentally transmitted maternal antibodies may seriously interfere with the response to the diphtheria vaccine. On the other hand, starting the immunizations at a later date may unnecessarily delay the establishment of some degree of protection against these diseases in the child. Because of the persistence of maternal antibodies, three injections are necessary to initiate basic immunity in young infants. The vaccines of choice are the absorbed or precipitated preparations which contain the recommended total amounts of the three antigens in three divided doses.<sup>3</sup> The second and third doses are given at six week intervals. There is evidence that shorter intervals between injections are less effective in that they are not followed by a marked rise in antibodies; longer intervals have the disadvantage of delaying the establishment of the patient's immunity, although they are satisfactory from the viewpoint of immunologic response, even if the interval is as long as many months or several years. The basic immunization in infancy is completed when a booster injection is given approximately nine to 12 months after the three initial injections,

\*Assistant Professor of Pediatrics, Children's Memorial Hospital, The University of Oklahoma School of Medicine.



namely when the infant is about 18 months old.

If the basic immunization is started in older children or adults only the diphtheria and tetanus toxoids are given since the consequences of pertussis are usually not severe after infancy. Besides, local and systemic reaction to this antigen, as well as to any other antigen, are most frequent and more severe in older children and adults, although these reactions do not necessarily involve the central nervous systems. Furthermore, in recent years it has been found that the usual amount of diphtheria toxoid causes a significant number of adverse reactions in older children and adults; therefore it is presently recommended that immunization in these age groups be started with the modified, so-called "adult type" DT vaccine which contains smaller amounts of the diphtheria toxoid. Two injections, four weeks apart, followed by a third injection one year later will confer adequate immunity.<sup>4, 5</sup>

The injections should be given by the intramuscular route. Occasionally a local reaction with tenderness, erythema and edema, or a mild fever, may develop approximately ten to 12 hours after the injection. These reactions usually do not last more than 12 hours and respond well to the administration of antipyretics.

In addition, some patients may have marked febrile reactions to the usual dose. In these persons, as well as in children with convulsive disorders, it is advisable to give smaller doses repeated at four to six week intervals.

The DPT or DT immunizations can be given simultaneously with other vaccines or during routine skin-testing procedures.

#### BOOSTER IMMUNIZATION

The basic immunization in infancy, to-

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gether with the reinforcement dose at 18 months of age, gives the child a degree of immunity sufficient for several years protection. It is recommended, however, that a fourth dose be given at the time the child is exposed to other children when he first enters school.<sup>6, 7</sup>

There is evidence that basic tetanus immunization, with or without booster injections, confers protective levels of antibodies (0.01 units or more per ml) for at least 15 to 20 years.<sup>8</sup> Although the efficacy of small booster doses of diphtheria contained in the "adult type" DT vaccine has not been extensively studied, it is general practice today to give one dose of this type of vaccine every ten years to maintain protective levels of immunity. More frequent inoculations are undesirable because of the increased number of side effects observed when booster injections are given to well immunized individuals. Thus, the practice of giving annual routine booster injections is to be discouraged.

#### IMMUNIZATION PROCEDURES IN CASE OF INJURY

At the time of an injury in which the physician considers the possibility of tetanus, it is current practice to administer an emergency booster injection of tetanus toxoid, provided there is sufficient evidence that the patient has received his basic immunizations in the past. If a booster injection has been given less than a year before, an emergency immunization may not be needed. If the patient has never been immunized it is recommended that besides the first injection of toxoid, a dose of anti-tetanus human immune globulin be given.<sup>9</sup> This dose of toxoid will not give any protection at the time of the injury, but will serve as the first dose of a basic series of inoculations. The human immune globulin dose is 250 units for adults and older children and 15 mg/kg for small children.

#### SUMMARY

The prevention of pertussis, diphtheria and tetanus can be achieved very efficiently with the initiation of the immunization against these diseases early in infancy. The combined type of vaccines, absorbed or pre-



cipitated, are the preparations of choice. In older children and adults, immunization can be initiated with the "adult type" of DT vaccine. Boosters administered every ten years with DT are considered sufficient to maintain good protective levels against diphtheria and tetanus. At the time of an injury an emergency booster injection may be given. In the unimmunized patient, in addition to an injection of toxoid, tetanus immune globulin should be given. ☐

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MICHAEL M. PAPARELLA, M.D., Professor and Chairman Department of Otolaryngology, University of Minnesota School of Medicine, Minneapolis, Minnesota.

WILLIAM F. HUGHES, M.D., Chairman Department of Ophthalmology, Presbyterian-St. Luke's Hospital, Clinical Professor of Ophthalmology, University of Illinois College of Medicine, Chicago, Illinois.

PETER C. KRONFELD, M.D., Professor Emeritus of Ophthalmology, University of Illinois, Chicago, Illinois.

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# Immunization Against Measles

## (Rubeola)

HARRIS D. RILEY, JR., M.D.

*Currently available vaccines against measles are safe and effective. Every child who has not experienced the natural disease should be immunized by one of the regimes described.*

**M**EASLES AS A major problem in child health cannot be overemphasized. During recent years safe and highly effective methods for active immunization against measles (rubeola) have been developed. All children who have not experienced the natural disease should be immunized with one of the vaccines currently available. Unless protected by vaccine, virtually all children will, at some time, have clinically evident measles. Measles is often a severe disease; it is of particular concern because of frequent complications, including bronchopneumonia, middle ear infection, and encephalitis. Encephalitis, which follows measles in approximately one of every 1,000 cases, often causes permanent brain damage and subsequent mental retardation. An average of one measles death occurs in every 10,000 cases. All susceptible children—those who have not had natural measles or measles vaccine—should be im-

munized. It is particularly important to immunize children who are still susceptible on entering nursery school, kindergarten and elementary school, because they are often responsible for transmission of measles to other children in the community.

*Live Attenuated Measles Virus Vaccine (Edmonston and Schwarz Strains)*: Live attenuated measles virus vaccine\* prepared from the Edmonston or Schwarz (further attenuated) measles virus strains is widely used in the United States. The Edmonston strain is propagated in either chick embryos or canine renal cell cultures; it may be given alone or simultaneously with measles immune globulin according to the manufacturers' directions. The Schwarz strain is prepared only in chick embryo cell cultures; it is suitable for administration without the concurrent administration of measles immune globulin.

The live attenuated measles virus vaccines produce a mild or inapparent, non-communicable infection. Fifteen percent of those subjects receiving either the Edmonston strain with measles immune globulin, or the Schwarz strain, experience fever, with temperatures of 103°F (rectal) or higher, beginning about the sixth day after vaccination and lasting no longer than five days. About twice as many (30 percent) of those receiving Edmonston strain vaccine without measles immune globulin have similar responses. The majority of children respond-

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\*The official name of the product in use is: Measles Virus Vaccine, Live, Attenuated.



ing with high fever experience relatively little discomfort and minimal toxicity.

An antibody response develops in virtually all susceptible children who are given live attenuated measles virus vaccines. The antibody titers following Edmonston strain vaccine administered with measles immune globulin or from Schwarz strain vaccine alone are slightly lower. However, all three of these vaccine schedules appear to confer lasting protection against naturally occurring measles and live attenuated measles virus vaccines are among the safest immunizing agents available. To date, serious reactions associated with their use have been very rare.

*Inactivated Measles Virus Vaccine:* Inactivated vaccines derived from Edmonston strain measles virus and prepared either in chick embryo or monkey cell cultures are available (Measles Virus Vaccine, Inactivated). These vaccines should be administered in a three-dose schedule, at monthly intervals, with a subsequent booster six months later. Following primary immunization with inactivated measles virus vaccine, the protection achieved in normal children has been satisfactory for the first few months, but has been shown to decline rapidly thereafter. Inactivated measles virus vaccines should *not* be used for immunizing *normal* children. It should be restricted for use in children in whom live attenuated measles virus vaccine may be contraindicated such as those with leukemia, lymphomas, or other generalized malignancies, and for those receiving corticosteroids, alkylating agents, antimetabolites, or irradiation. Reactions to inactivated measles virus vaccine are infrequent, mild and resemble those observed after administration of other alum-precipitated products (e.g., diphtheria and tetanus toxoids).

*Recommendations for Use:* Immunization is particularly important for those in high risk groups such as children with cystic fibrosis, heart disease, asthma, or other chronic pulmonary diseases and for those who are residing in institutions.

*Recommendations for Vaccine Use:*

*Age:* For maximum efficacy, live attenuated measles virus vaccine should be administered when children are at least 12 months

old. It can be given to infants at nine to 12 months of age realizing that the proportion of vaccine responses may be slightly reduced. This proportion is further decreased if measles immune globulin is administered with the vaccine. Vaccination of adults, at the present time, is rarely necessary because nearly all individuals are immune by age 15. Limited data indicate that reactions to vaccine are no more common in adults than in children. There is preliminary evidence from studies in this clinic indicating that infants can be immunized successfully beginning as early as six weeks of age by the administration of three injections of inactivated vaccine followed by a single injection of live attenuated virus vaccine, without concomitant gamma globulin, given at approximately nine months of age. The majority of these subjects exhibited an excellent antibody response and preliminary studies indicate that the degree of protection is significant. The inactivated measles vaccine also can be combined in the same syringe with diphtheria, pertussis and tetanus antigens or in the same syringe with inactivated poliomyelitis vaccine. Until more information is available, this regimen should not be used routinely.

*High Risk Groups:* Immunization against measles is particularly important for children with chronic illnesses, such as heart disease, cystic fibrosis and chronic pulmonary diseases, as well as for children with malnutrition and those living in institutions.

*Prevention of Natural Measles Following Exposure:* Live attenuated measles virus vaccine usually can prevent disease if administered before or on the day of exposure to natural measles. Limited studies reported to date indicate that protection is not conferred when vaccine is administered after the day of exposure, nor are adverse effects induced by measles immunization following exposure.

*Precautions in the Use of Live Attenuated Measles Virus Vaccine:*

*Severe Febrile Illnesses:* Vaccination should be postponed until recovery is complete.

*Tuberculosis:* The exacerbations of tuberculosis that have been related to natural measles infection, by analogy, might accompany infection with live attenuated measles



virus. Therefore, any individual with known active tuberculosis should be under treatment when given measles vaccine. Although tuberculin skin testing is desirable as a part of ideal health care, it need not be a routine prerequisite in community measles immunization programs. The value of protection against natural measles outweighs the theoretical hazard of possible exacerbation of tuberculosis infection by the administration of the vaccine.

*Recent Immune Globulin Administration:* After administration of immune globulin, immunization should be deferred for three months. Persistence of measles antibody from the globulin may interfere with response to the vaccine.

*Marked Hypersensitivity to Vaccine Components:* Measles vaccine produced in chick embryo cell cultures should not be given to children who are hypersensitive to ingested egg proteins. Similarly, vaccine produced in canine cell cultures should not be administered to children who are highly sensitive to dog hair or dog dander. To date, no reactions of the anaphylactic type following the administration of measles vaccine have been reported in the United States.

*Contraindications to Use of Live Attenuated Measles Virus Vaccine:*

*Leukemia, Lymphomas, and Other Generalized Malignancies:* Administration of live attenuated measles virus vaccine to children with leukemia has occasionally been followed by severe complications such as fatal giant cell pneumonia. Theoretically, attenuated measles virus infection might be potentiated by other severe underlying diseases, such as lymphomas and generalized malignancies.

*Altered Resistance from Therapy:* Steroids, alkylating drugs, antimetabolites, and radiation may predispose patients to untoward complications due to altered resistance.

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*Pregnancy:* Purely on speculative grounds, physicians are reluctant to risk causing fetal damage that theoretically might be related to attenuated measles virus infection. Immunization with inactivated vaccine is not contraindicated during pregnancy.

*Management of Patients with Contraindications to Live Attenuated Measles Virus Vaccine:* If immediate protection against measles is required for persons in whom use of live attenuated measles virus vaccine is contraindicated, passive immunization with measles immune globulin (dose 0.25 ml/kg) should be given as soon as possible after a known exposure. It is important to note, however, that the preventive dose of measles immune globulin which is effective in normal children may not be equally so in children with acute leukemia. Inactivated measles virus vaccines may induce longer lasting protection than that provided by measles immune globulin, but many children with leukemia and those receiving immunosuppressive drugs respond poorly.

*Prior Immunization with Inactivated Measles Vaccine:* Atypical measles, sometimes severe, following exposure to natural measles, has occasionally been observed in children previously immunized with inactivated measles virus vaccines. Untoward local reactions such as induration and edema have, at times, been observed when the live measles virus vaccine was administered to persons who had previously received inactivated vaccine.

Despite these reported instances of unusual associations, children who have been given inactivated measles vaccine should also be given the live vaccine for full and lasting protection against natural infection.

*Simultaneous Administration of Live Virus Vaccines:* Data on simultaneous administration of live virus vaccines are not sufficient to develop comprehensive recommendations, but there are obvious practical advantages to combining vaccines, and investigations are underway which should help define optimal practices. When combined administration is indicated, available data do not suggest that undesirable responses will result. The following comment presents current attitudes toward scheduling immunization with three major live virus vaccines—polio, measles, and smallpox.



It has been recommended generally that immunizations with live virus vaccines be separated by at least one month whenever possible. The rationale for the recommendation is the theory that superimposed reactions and diminished antibody responses might result if two or more live virus vaccines are given simultaneously. Ideally, the initial doses of oral poliovirus vaccine should have been given before a child reaches one year, the age recommended for giving live attenuated measles virus vaccine. Administration of polio and measles antigens should be separated by at least one month. It is likewise desirable to separate measles and smallpox vaccinations by one or more months because both of these antigens may produce febrile reactions.

When, however, immunization program effectiveness is hindered or when the threat of concurrent exposures exists, the appropriate live virus vaccines should be given at

the same time. Observations do not indicate that this will cause a significant increase in adverse reactions or depressed antibody responses to either antigen.

*Passive Immunization:* As mentioned above, measles may be prevented temporarily or modified by the use of gamma globulin of known measles antibody titer. Although a modified attack of measles confers permanent immunity in most persons, this does not usually occur when the disease has been completely prevented. Therefore, active immunization should be carried out approximately three months later. □

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# Immunizations in the Future

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*Considerations for vaccine development and use, including the comparison of risks of disease with hazards of immunization are reviewed. Rubella, influenza, attenuated vaccinia, shigella, and pneumococcal vaccines are discussed.*

DURING THE PAST few decades, technical advances in virology, bacteriology, and immunology have enabled scientists to recognize new etiologic agents, purify and concentrate antigens, and understand the immune process of man more completely. Such progress has provided the capability to develop a variety of new vaccines. Simultaneously, in the United States, improved standards of living and medical care, including vaccine distribution, have brought many se-

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vere illnesses under control and shifted the priorities for vaccine development to the remaining milder diseases which involve large numbers of people and to illnesses which cause unusual morbidity in specific segments of the population. This paper will review some general considerations for the development and use of immunizing agents in order to provide perspective for reflections about new and old vaccines. In addition, it will briefly review some of the more promising new vaccines.

## CONSIDERATIONS FOR VACCINE DEVELOPMENT AND USE

The stimulus to develop a vaccine arises when a disease is judged a significant cause of morbidity in light of the health priorities of the time. After development, a vaccine must be justified by establishing that the risk of disease is significantly greater than the hazards, both actual and potential, of immunization. In fact, it is by comparing the morbidity of a disease with the hazards of immunization that the indications for vaccine use are established.

The need for vaccine development is determined by the basic epidemiologic features of a disease—descriptive morbidity and the host-parasite-environment interrelationship. The extent of morbidity due to a disease suggests the desirability of control. That vac-



cine development and use are the most efficient and effective methods of control is established by the nature of the host-parasite-environment interrelationship and the technical feasibility of vaccine production. Thus, rubeola, with extensive respiratory spread, can be efficiently controlled only by immunization, while malaria may be prevented, at least in part, by vector control.

In formulating indications for vaccine use the epidemiologic characteristics of a disease are an important consideration. Attention should be directed not only to gross incidence and severity but also to specific groups which by virtue of personal or environmental factors, risk increased morbidity due to the disease. In this way, those persons likely to experience unusual morbidity can be identified and protected. In addition, the control of disease through the use of vaccine is based upon the characteristics of the susceptible population, the risks of exposure, and the patterns of disease spread. The recommended use of currently available vaccines illustrates the role of epidemiologic information. For example, although epidemic influenza may involve all segments of the population, vaccine is primarily recommended for use in the elderly and in those with chronic debilitating disease—two groups in which influenza has been demonstrated to cause increased morbidity and mortality. Similarly, the high mortality rate of pertussis in early infancy is the major rationale for the administration of DTP during the first months of life.

The other important consideration in the justification of vaccine use—the risk of immunization—is assessed by laboratory tests and field trials conducted during vaccine development. Care, however, should be exercised in the interpretation of these studies. Information derived from laboratory test systems cannot always be directly applied to man, hence some aspects of vaccine safety are not amenable to laboratory evaluation. Furthermore, although appropriate laboratory tests can exclude from vaccines specific contaminating substances and adventitious agents, these tests may indicate little about the presence of other contaminants, particularly those which are unsuspected. Field

trials in human volunteers complement and supplement the laboratory evaluation of vaccine safety. Nevertheless, controlled trials may fail to detect delayed adverse effects age-related relations to vaccination, or complications occurring at very low rates, *i.e.*, those which may be recognized only after the administration of hundreds of thousands or millions of doses of vaccine. The history of some of our more desirable and successful vaccines illustrates the potential hazards associated with immunization. Shortly after the licensure of inactivated poliovirus vaccine, 94 cases of paralytic poliomyelitis were noted among immunized individuals within ten days of vaccination.<sup>1</sup> These cases resulted from the administration of vaccine which contained a residual amount of inadequately inactivated virus. Later, SV40, a virus with oncogenic potential in rodents, was identified as a contaminant of inactivated poliovirus vaccines.<sup>2</sup> These episodes resulted in the development of more rigid regulations for the preparation and safety-testing of vaccines. Even so, the exceedingly low risk of paralytic poliomyelitis among adults receiving oral poliovirus vaccine was not recognized until the vaccine had been used extensively.<sup>3</sup>

The widespread use of an immunizing agent may result in the emergence of vaccine characteristics which were previously unrecognized and may also cause significant

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shifts in disease ecology. Consequently, to assure the safe and efficient use of vaccines, the hazards of immunizations and risks of disease must be assessed periodically. This requires data derived from the continuous epidemiologic evaluation of disease status and vaccine performance.

#### NEW IMMUNIZING AGENTS

Although not intended to be complete, the table lists vaccines currently under study. Several of these immunizing agents, while still experimental, merit more detailed consideration because recent data suggest that they possess particular promise.

*Rubella Vaccine:* Gregg's observation, in 1941,<sup>4</sup> of the teratogenic nature of rubella infection in early pregnancy demonstrated the need for a rubella vaccine, a need dramatized by the devastating 1964 rubella epidemic. Nevertheless, it was not until rubella virus was isolated in 1962<sup>5</sup> that vaccine development became possible. In 1966, Parkman, Meyer, and colleagues reported the attenuation of rubella virus by serial passage 77 times in primary African green monkey kidney cells.<sup>6</sup> This strain of attenuated rubella virus, known as high passage virus-77 (HPV-77), has given rise to derivative-candidate vaccines produced in primary African green monkey kidney cells, duck embryo fibroblasts, and canine renal cells. In addition, two other candidate-vaccines have been developed in rabbit kidney and diploid human-lung fibroblast cells.<sup>7</sup>

Clinical experience with the various candidate-vaccines suggests that their virulence and immunogenicity are remarkably similar. Following a single injection of live, attenuated rubella vaccine, approximately 95 percent of susceptible recipients develop antibodies. Mean antibody titers induced by the vaccine, although lower than those resulting from natural disease, have plateaued and remained stable for three years, the observation period to date.<sup>8</sup> In limited studies, vaccines have been protected against clinical rubella following both natural challenge and experimental challenge with unmodified rubella virus.<sup>9, 10, 11</sup> The recent development of this vaccine precludes observations regarding long-term duration of protection. However, reasoning from experience with other attenuated, live virus vaccines and the ap-

parent stability of vaccine induced antibody, the prospects for long-term immunity following a single dose of vaccine seem bright.

Rubella vaccine has not been noted to cause adverse reactions such as fever and rash, among susceptible children.<sup>8</sup> However, vaccination of susceptible, adult females has caused lymphadenopathy and transient arthritis and arthralgias. These joint symptoms, which may occur in as many as 30 percent of adult, female vaccinees, have not been more severe than those caused by natural rubella in this group.<sup>12</sup>

Attenuated rubella virus is recoverable in the naso-pharyngeal secretions of approximately 70 percent of vaccinees at some time between the 7th and 25th day after vaccination.<sup>8</sup> Although this observation has raised the question of communicability, extensive study in institutional and household groups has failed to demonstrate the transmission to the vaccine virus from vaccinee to susceptible contact.<sup>8</sup>

The vaccine appears suitable for administration to children. In contrast, the immunization of susceptible women of child-bearing age may be hazardous. Although the attenuated rubella virus has not been observed to cross the placenta of rhesus monkeys,<sup>8</sup> there remains a theoretical risk that immunization of pregnant women could result in fetal infection and congenital abnormalities. Until this risk is dispelled, administration of rubella vaccine to women who are pregnant or likely to become pregnant shortly after vaccination is contraindicated. In addition, adult females may less readily accept immunization because of vaccine-associated joint symptoms. Nevertheless, rubella vaccine will be a powerful tool with which to control rubella and prevent rubella syndrome. This could be accomplished by vaccination of children, the major group involved in the spread of rubella. With extensive immunization of children, rubella virus circulation and subsequent exposure of pregnant women would be significantly reduced.

*Influenza Vaccine:* Influenza vaccines have been in use for 23 years but the disease continues to cause significant morbidity. This is due, in part, to the periodic mutation of the virus; however, the inadequacy of con-



trol is also related to the relatively poor protection and frequent adverse reactions associated with current vaccines. It has been thought that increased efficacy could be achieved through increasing the antigenic content of the vaccine, yet attempts to increase antigen in influenza vaccines have been hindered by concomitant increases in local and systemic reactions. Recent studies with highly purified influenza virus antigens indicate that vaccine reactions are related to extraneous foreign protein. By removing this protein, the antigenic content of vaccine can be significantly increased without increasing the reactogenicity of the preparation. Davenport and colleagues, vaccinating with hemagglutinin extracts from whole virus, found that reactions virtually could be eliminated while the neutralizing and hemagglutination inhibition antibody levels were as high or higher than those resulting from reactogenic, intact virus vaccines of equal antigenic strength.<sup>13</sup> Peck, using zonal ultracentrifugation, developed a purified and markedly concentrated influenza vaccine which results in serologic responses comparable to those of standard vaccines while having lower reaction rates.<sup>14</sup> The application of these observations may promote production of vaccines with greater antigen content and little reactogenicity and may represent a major advance toward more potent—and possibly more effective—influenza vaccines.

*Vaccinia Vaccine:* Although very effective, smallpox vaccination results in relatively frequent adverse reactions. In particular, children with eczema are vulnerable to generalized vaccinia when they are vaccinated or in contact with recent vaccinees. Kempe and colleagues have vaccinated more than 1,000 high risk, eczema patients with a vaccinia strain (CVI-78) attenuated by repeated passage in chick embryos.<sup>15</sup> Febrile and local reactions in these vaccinees are less than those which occur in normal children receiving standard vaccinia preparations. In addition, generalized vaccinia has not occurred. Antibody response is comparable to that seen in normal children receiving standard smallpox vaccine. Although further study is required to assess CVI-78 and define its role, it appears, to date, to be

a safe approach to elective primary vaccinia vaccination of children with eczema.

*Shigella Vaccine:* Epidemic shigellosis occurs very infrequently in this country. Endemic shigellosis, on the other hand, occurs in high risk groups, particularly in the underprivileged population and in relatively closed populations such as Indian reservations, homes for the retarded, orphanages, and homes for the aged. In endemic foci, shigellosis may be amenable to control by vaccine. Four live bacterial agents are vaccine candidates: (1) Spontaneous avirulent mutants. (2) Avirulent hybrid strains prepared by mating *E. coli* with virulent shigella strains. (3) Streptomycin dependent strains of *Shigella flexneri* 2. (4) A colonial-mutant strain prepared by mating *E. coli* with avirulent mutants.<sup>16</sup> Occasionally, spontaneous mutants revert to virulent organisms; therefore they would be unreliable vaccines. Streptomycin dependent strains, although safe and protective against clinical disease for at least four months, do not propagate in the gut and consequently, multiple doses are required for adequate immunization.<sup>17</sup> The colonial-mutant strain, whose genetic composition makes reversion to virulence highly unlikely, holds greatest promise as an oral immunizing agent. Studies are in progress to determine if vaccines will effectively reduce endemic illness and establish durable immunity.

*Pneumococcal Vaccine:* Pneumococcal vaccines were developed and licensed during the 1940's; however with the availability of antimicrobial agents demand lapsed. Recent observations suggest that these vaccines might be useful in selected groups. Austrian and Gold<sup>18</sup> noted that in pneumococcal illness the mortality rate in patients over 50 years of age was four times higher than the rate in younger patients. Similarly, the mortality rate in patients with chronic debilitating illnesses was four times that noted in those without underlying medical problems. More striking, however, is the observation that during the first four days of illness patients treated with penicillin experienced the same mortality rate, nine percent, as did patients during the pre-antibiotic era. It seems likely that further significant reduction in mortality will be achieved only through prevention of pneumococcal infections.



The pneumococcus has more than 40 capsular types; however, infection with one of six types (I, III, IV, VII, VIII, XII) accounts for 50 to 60 percent of all pneumococcal deaths. Pneumococcal polysaccharide antigens produce a reliable antibody response within a week of administration. After a single injection, significant titers of circulating antibody persist for as long as five years. In addition, antibody response to each of six simultaneously administered polysaccharide antigens is equal to that obtained with the respective antigen given separately. Trials have demonstrated the clinical efficacy of pneumococcal vaccines in military<sup>19</sup> and elderly civilian populations.<sup>20</sup> A vaccine incorporating the most significant pneumococcal types, used in high risk groups, could reduce morbidity considerably. Evaluation of such vaccines is in progress.

### CONCLUSION

The increasing number of vaccines available for use has stimulated attempts to simplify the logistics of immunization. Combined bacterial vaccines and toxoids (DTP) have been administered for many years. Recently, the safety and efficacy of the simultaneous administration of live-virus vaccines have been studied. Serologic and clinical observations of various antigen combinations are encouraging; however, these observations are still limited to relatively small numbers of vaccinees. Further study is required before this practice can be recommended.

The emergence of safe, effective new vaccines will enable physicians and public health departments to provide better health for many people. As new vaccines and combinations of vaccines become available, increased efforts must be directed toward the surveillance of disease, vaccine efficacy and adverse vaccine effects. The use of this surveillance data, in weighing the hazards of vaccination against the risks of disease will assure safe and efficient immunization policies. □

### PATHOGENS FOR WHICH VACCINES ARE CURRENTLY UNDER STUDY

Bacteria	Viruses and Rickettsiae	
Cholera vibrio	Adenoviruses	Respiratory Syncytial Virus
Meningococci	Arboviruses	Rhinoviruses
Mycoplasma pneumoniae	Herpes simplex	Rickettsia burneti (Q-fever)
Pneumococci	Influenza	Rubella
Shigella	Parainfluenza	Trachoma
Streptococci		Vaccinia

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**OKLAHOMA STATE HEALTH DEPARTMENT  
SCHEDULE FOR ACTIVE IMMUNIZATIONS AND TUBERCULIN TEST FOR  
NORMAL INFANTS, CHILDREN, AND ADULTS\***

**DIPHTHERIA, PERTUSSIS, TETANUS (DPT) – DIPHTHERIA, TETANUS (dT)**

**A. Primary Immunization**

1. Approximately 6 weeks through 6 years  
3 intramuscular injections of DPT at 4-6 week or more intervals with a reinforcing dose 1 year or more after 3rd injection.
2. Adults and children over 6 years  
2 intramuscular injections of dT at 4-6 week or more intervals with a reinforcing dose 1 year or more after 2nd injection.

**B. Booster Immunization**

1. 3 years through 6 years  
Single intramuscular dose of DPT preferably at time of school entrance.
2. Adults and children over 6 years  
Single intramuscular dose of dT every 10 years, calculated from date of last dose of booster or date of injury prophylaxis.
3. Injury prophylaxis with dT if date of last booster over one year.

**MEASLES**

**A. Primary Immunization**

1. 12 months and older
  - a. Single dose of further attenuated measles vaccine (Schwarz) is recommended.
  - b. Measles vaccine (Edmonston) with immune globulin is also acceptable and the only preparation available at the Oklahoma State Health Department.

**B. Booster Immunization**

Not recommended.

**POLIO**

**A. Primary Immunization**

1. 6 weeks through 1 year  
3 oral doses of Trivalent OPV. Two doses 8 weeks or more apart and the third 8-12 months or more after the second.
2. 1 year through 18 years  
3 oral doses of Trivalent OPV. Two doses 8 weeks or more apart and the third 8-12 months or more after the second.

**B. Booster Immunization**

1. School entrance  
On entering elementary school, all children who completed a primary OPV series should be given a single follow-up dose of Trivalent OPV.
2. Routine boosters not recommended.

**SMALLPOX**

**A. Contraindications**

1. Insect bites, eczema, rashes, etc.

**B. Primary Vaccination**

1. Between 1st and 2nd birthday preferable or at any age thereafter for unvaccinated persons.

**C. Revaccination**

1. On entering elementary school
2. At 3 year intervals for medical personnel, hospital personnel, public health personnel, and allied profession. For foreign travel.
3. At 10 year intervals for all others.

**TYPHOID** – Not recommended for routine use.

**TUBERCULIN TESTING**

**A. Primary**

9-11 months of age

**B. Re-test**

6 years and 12 years as indicated according to possibility of exposure.

\*Based on recommendations of USPHS and the American Academy of Pediatrics.

\*Approved by the Oklahoma State Medical Association and the Oklahoma State Osteopathic Association.

September, 1968



# Tumor Board Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.\*

## CASE No. 7: Squamous Cell Carcinoma of the Tonsil

**PRESENTATION:** The patient is a 69-year-old white male who was presented to the Tumor Board last Tuesday. You will recall this gentleman had a history of enlargement of the right side of the neck for approximately ten to 12 months prior to having been seen here, and a three-month history of persistent pain present in the right tonsil area. He was seen in the ENT Clinic and examination at that time revealed the tonsil deviated toward the mid-line with a small ulceration present on the superior pole of the right tonsil. The right tonsil was quite firm and hard and there seemed to be some induration at the base of the tongue on the

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery of the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

\*Assistant Head, Cancer Section, Oklahoma Medical Research Foundation, Assistant Professor of Research Medicine and Associate Professor of Research Biochemistry, University of Oklahoma School of Medicine, 825 N.E. 13th Street, Oklahoma City, Oklahoma 73104.

right side. There was a 1 x 2 cm firm, slightly tender, moveable lymph node present at the angle of the mandible on the right side. The tonsil was biopsied but there were several differing opinions as to what the specimen showed. Because of these differences it was recommended that the tissue be re-biopsied and the case again be presented to the Tumor Board. This has been done. The most recent biopsy was interpreted as representing a poorly-differentiated, squamous cell carcinoma.

\***DOCTOR CONDIT:** Doctor Snow, now that we have a tissue diagnosis, what would be your thoughts about the management of this patient?

\*\***DOCTOR SNOW:** The concern last week of the pathologist was that this specimen looked like pseudoepitheliomatous hyperplasia rather than a malignant tumor, which is something very much to bear in

\*Doctor Paul T. Condit—Head, Cancer Section, Oklahoma Medical Research Foundation, Associate Professor of Research Medicine, of Radiology (Oncology), and Professor of Research Biochemistry, University of Oklahoma School of Medicine.

\*\*Doctor James B. Snow, Jr.—Professor and Head, Department of Otorhinolaryngology, University of Oklahoma School of Medicine.



mind because any inflammatory lesion involving the upper respiratory tract can produce this pseudoepitheliomatous hyperplasia . . . which must not be misinterpreted as a malignant tumor. I don't think this tissue is a very good example of possible pseudoepitheliomatous hyperplasia, but at least the point is well taken. The other thing is that the physical findings in this case aren't really very impressive as far as it being one of obvious carcinoma. One could easily misinterpret the appearance of this right tonsil as representative of an inflammatory process. If one simply thinks in terms of inflammatory processes he is going to delay the treatment of such a patient. This is why prompt biopsy is in order. Even if there had been no nodes in the neck, which are very suggestive of metastases, it is good that this lesion was biopsied promptly, rather than procrastinating while some sort of treatment for an infectious process were employed. I am not saying that one should biopsy all inflammatory lesions in the respiratory tract; but if one is guided by the white blood cell count, the lack of fever, and the duration of symptoms, a biopsy is certainly in order and should be carried out very promptly. As far as treatment is concerned, the treatment of choice for carcinoma of the tonsil is radiation therapy, both to the primary lesion and to the metastatic nodes in the neck. However, I think it is also worthwhile to consider resection of the primary lesion and a radical neck dissection following radiation therapy. Our current feeling about this case is that radiation therapy still ought to be followed by a radical resection of the tonsillar fossa, and mandible and a neck dissection.

DOCTOR CONDIT: Doctor Bogardus, do you concur?

\*\*\*DOCTOR BOGARDUS: The combination of radiation and surgery offers this man the best possible chance of cure. We have done a number of these cases in the past. We treat them to a high dose in the tonsillar area, at least 7,000 to 8,000 rads, and carry the neck area up to around 5,000 rads. Then we observe and evaluate the patient's response. If the tonsillar lesion appears to

have been controlled . . . which has been reported in as many as 40 to 50 percent of cases in some series . . . then you consider the radiation as having been a curative procedure for the primary site. You are still obliged to do a neck dissection on these patients. Radiation therapy is able to sterilize the tumor in the tonsil but very seldom do we ever sterilize the tumor in the neck due to upper-limit dosage-restrictions. As the patients approach the day for surgery, we re-evaluate the site of the primary lesion and decide which surgical procedure seems necessary at that time.

DOCTOR SNOW: Our experience in following results of that procedure indicate about a 25 percent three-year survival. Although this is not bad for tonsillar lesions, we would like to see now what could be accomplished by a more aggressive surgical approach following radiation therapy.

RESIDENT: When you do just a unilateral neck dissection do patients ever have a recurrence on the opposite side?

DOCTOR SNOW: Yes.

RESIDENT: Then why don't you do it on both sides?

DOCTOR SNOW: Well, the probability of metastasis to the opposite side of the neck from a tonsillar lesion is about ten percent, and I think you can make a very strong case for elective contralateral neck dissection, particularly when you find metastatic nodes during the ipsilateral neck dissection. In general, we have not done elective contralateral neck dissection for carcinoma of the tonsil but perhaps one could make a good case for it. On the other hand, one also can make a good case for just observing the patient and doing the neck dissection if nodes become palpable. The breaking point where one chooses to proceed with elective neck dissection varies, of course, with the philosophies of the individuals. When the probability of metastasis is 25 percent, I think everyone agrees that a prophylactic or elective neck dissection should be done. One encounters a lot of disagreement around ten percent probability of metastasis. If it were a matter of actually salvaging the ten percent of the patients who have contralateral metastases, that would be one thing, but that is not what happens. A certain percentage of that ten percent, who have contralateral metastases,

\*\*\*Doctor Carl R. Bogardus—Associate Professor of Radiology, Director of Division of Radiation Therapy, University of Oklahoma School of Medicine.



die of their distant metastases; so it isn't a matter of doing a neck dissection on the other side to increase our five-year survival by ten percent. It just doesn't work that way. The increase in five-year survival may be only one to two percent.

DOCTOR CONDIT: If you were going to plan in advance to do both neck dissections, what interval of time would you allow between the two?

DOCTOR SNOW: About six weeks. If one waits six weeks between neck dissections, the morbidity and mortality are reduced. In this way we don't really have any particular post-operative difficulty with cerebral edema. The patients do have swelling of their faces, but usually there are no life-threatening problems with observance of the six-week interval.

DOCTOR CONDIT: But if you were to do them both at one time, you would encounter serious vascular problems, wouldn't you?

DOCTOR SNOW: Yes, resulting in a mortality of around ten percent in the immediate operative period. Returning to the question of an increase of one to two percent in the five-year survival rate, the numbers of patients who are required to demonstrate a real difference between a survival rate of 75 percent and 85 percent in two treatment groups are enormous. One would have to have around 500 patients in each category, to demonstrate even an increase in the survival of 75 percent to 85 percent of the patients. You know there are very few things we add as embellishments to the patient's treatment that are likely to produce that magnitude of improvement in results. It is very difficult, when one considers a mere one to two percent increase in survival, to justify adding another operative procedure.

DOCTOR CONDIT: The other point of course is if you are to salvage only one or two percent, then your operative morbidity-

mortality increases, so that this may be an impractical thing to do. Don't you think it is fair to say this: if you do encounter metastases in the opposite side of the neck it is merely a manifestation of widespread dissemination? Pulmonary metastases are common in those patients.

DOCTOR SNOW: Yes, except there are, as you know, a number of survivors who have had histologically-positive nodes from both neck dissection specimens and are now, a good time after their treatment, showing no evidence of recurrence. The presence of metastases in either side of neck drops the survival rate of all these patients to an exceedingly low figure. One positive node in the neck is devastating to the prognosis. It drops the five-year survival chance to about ten to 15 percent in cases with squamous cell carcinoma.

DOCTOR CONDIT: Ordinarily with someone such as this, as I understand your comments, the usual course is to proceed with a neck dissection and watch him closely, and if he develops what appears to be a metastasis to the opposite side, then go ahead and do a neck dissection at that time. Is that right?

DOCTOR SNOW: For a tonsillar lesion, yes. Some laryngeal lesions for which the possibility for contralateral metastases is greater, if there are involved nodes on one side, then we proceed with the elective contralateral neck dissection.

*DIAGNOSIS:* Poorly differentiated squamous cell carcinoma of the right tonsil.

*TUMOR BOARD RECOMMENDATIONS:* Radiation therapy to the tonsil to a tumor dose of 7,000 to 8,000 rads and radiation therapy to the right side of the neck to a dose of 5,000 rads. The patient is to be followed closely and if the tumor persists excision of the primary lesion and a right radical neck dissection should be carried out. □

## ATTENTION ALL OSMA PHYSICIANS

# MARK YOUR CALENDAR NOW!

Make your plans now to attend the Annual Meeting of the  
Oklahoma State Medical Association

May 15th, 16th and 17th, 1969

Tulsa Assembly Center

Tulsa, Oklahoma



## MARCH IS IMMUNIZATION MONTH

At the request of the Oklahoma State Medical Association and the Oklahoma State Health Department, Governor Dewey Bartlett has proclaimed March to be Immunization Month throughout Oklahoma. At a press conference called to announce the proclamation, the governor took his "shots" in public to get the month-long educational campaign off to a good start.

The program is a joint effort of the OSMA and its component societies and the Oklahoma State Health Department and local county health departments. Armond Start, M.D., Chairman of the OSMA Committee on Immunization, stated that even though immunization education should be a year-round project, at least once a year there is an urgent need to re-emphasize the vital importance of this type of protection. He went on to state that this is especially true this year because it is now possible to eradicate the seven-day, hard, red measles in Oklahoma.

Using the symbol of "Emmy Immunity" and her twin brother, "Lemmy," all communications media will be requested to participate in the campaign. Schools, organizations, and businesses will be requested to assist with the distribution of literature.

Under Doctor Start's leadership, the Immunization Committee is working out a year-round program to be conducted after immunization month. This program actually started in late 1968 when all physicians in Oklahoma were sent a newly revised immunization schedule that had been worked out by the committee and the state health department. This schedule appears in full on page 116 of this issue of *The Journal*.

Other promotion activities for the year-round program will include a

special booth to be installed at the OSMA convention in Tulsa to give immunization shots and boosters to physicians. A letter soliciting speaking time at all county societies has been mailed to each county society president. The committee will furnish speakers and a program emphasizing complete immunization to any interested society.

Past immunization programs in Oklahoma have shown remarkable results. There is no reason why Oklahoma cannot be free of measles in 1969. In 1968 there were only 154 cases of this disease reported while there were 3,406 reported in 1967. With the advent of the polio vaccines this dread disease has been all but eliminated in Oklahoma. Unfortunately there was one case reported in 1968.

Diphtheria is another communicable disease that is a target for eradication in this program and fortunately the year 1968 marked a diphtheria-free year for Oklahomans. However, as recently as 1967, a 54-year-old man died from this preventable disease.

Tetanus was nonexistent in 1968 in this state, but there were four reported cases in 1967, including one death, from this disease which claims the lives of 60 percent of its victims.

Even though no case of smallpox has been reported in Oklahoma since 1959, Doctor Start and the Immunization Committee feel that the level of protection against this disease should be maintained at its present high rate. In 1928 Oklahoma had 3,347 cases of smallpox and in 1939 there were 605 cases. The yearly increase in international travel persistently threatens to re-introduce smallpox into this country.

The entire campaign will emphasize

the importance of controlling the seven major preventable diseases—diphtheria, whooping cough, tetanus, measles, polio and mumps.

In his statement proclaiming March to be Immunization Month, Governor Dewey Bartlett said that, "Even one case of preventable disease is tragic and needless when there is effective vaccine readily available to all; and immunization, an important advancement in medical science, is vital to the good health of every man, woman, and child . . ."

The members of the Immunization Committee are urging all Oklahoma physicians to acquaint themselves with the immunization schedule recommended by the OSMA and the OSHD and then remind their patients of the benefits of an up-to-date immunization record.

The Committee on Immunization is a part of the OSMA's Council on Public Health chaired by Hayden H. Donahue, M.D. The committee consists of: Armond H. Start, M.D., Chairman, Charles L. Freede, M.D., John C. Kramer, M.D., and Yale E. Parkhurst, M.D. □

## Annual Meeting— Informative, Entertaining, Exciting

For the 63rd time physician-members of the OSMA will hold their annual meeting. The three-day get-together will be held in the Tulsa Civic Center and the Mayo Hotel, May 15th-17th.

Lucien M. Pascucci, M.D., General Chairman of the 1969 Annual Meeting, has announced that the program is complete and has stated that this meeting should be the biggest and best ever put on by the state association. The meeting will feature educational scientific sections, nightly entertainment functions and over 90 exhibits.

### Entertainment

A series of nightly entertainments will be held in the headquarters, Mayo Hotel, according to Jack L. Richardson, M.D., Social Chairman for the meeting.

Starting Thursday evening, May



15th, the first entertainment will be an Oyster Crack featuring raw and cooked oysters. The crack is being held early in the evening so that convention goers can have dinner in their favorite Tulsa restaurant.

On Friday evening, May 16th, there will be a repeat of the popular Gaslight Party in the Mayo Hotel's Crystal Ballroom. Dixieland music, dancing girls and group singing will be on tap for the evening. The Gaslight Party starts at 8:00 p.m., so there will be time for specialty societies to have early dinners for their memberships.

The President's Annual Inaugural Dinner-Dance is traditionally held on Saturday evening, closing the convention. This year is no exception and the dinner-dance will be held Saturday evening, May 17th, in the Crystal Ballroom.

In addition to the three big entertainment functions, the popular stage door luncheons will be another feature of the 63rd Annual Meeting. Two complimentary luncheons will be held on the stage of the Tulsa Civic Center at noon on Friday and Saturday, May 16th and 17th.

A special feature of this year's exhibit area will be a large display set up to show doctors' hobbies.



Allen P. Thal, M.D., Guest Speaker, to appear at the General Surgery Scientific Section during the Annual Meeting.

## Business

Business aspects of the 63rd Annual Meeting include the annual meeting of the OSMA Board of Trustees and of the House of Delegates. The Board of Trustees will meet Thursday afternoon, May 15th, to discuss the various business aspects of the association.

The OSMA House of Delegates will convene Friday morning, May 16th, for the introduction of committee and council reports, memorials, and resolutions. Reference committees of the House will meet Friday afternoon to consider the reports that have been submitted for House consideration. Each of the committee sessions will be open and physician-members are invited to come to the committees and express their views and opinions on the reports and resolutions.

The final meeting of the House of Delegates and the election of officers will be held Saturday morning, May 17th. At that time the House will take final action on the committee reports, memorials and resolutions.

## Scientific

There will be 14 scientific sections during the 63rd Annual Meeting. All sections will be held in the Tulsa Civic Center. This year there will be one general scientific session for all physicians. This will be the "Special Seminar on Trauma" to be held Friday, 1:30 p.m., May 16th.

Principal speakers are listed by section meeting as follows:

### THURSDAY, MAY 15th

- 1:30 p.m.—**Pediatrics** — Thomas K. Oliver, Jr., M.D., Professor of Pediatrics, University of Washington School of Medicine, Seattle, Washington.
- 1:30 p.m.—**Pathology**—L. W. Diggs, M.D., Professor of Medicine and Hematology, University of Tennessee School of Medicine, Memphis, Tennessee.
- 1:30 p.m.—**Orthopedics** — Edward L. Compere, M.D., Chairman, Department of Orthopaedic Surgery, Wesley Memorial Hospital, Chicago, Illinois; William F. Meacham, M.D., Clinical Professor of Neurological Surgery,



Edward L. Compere, M.D., Guest Speaker, to appear at the Orthopaedic Scientific Section during the Annual Meeting.

Vanderbilt University School of Medicine, Nashville, Tennessee.

### FRIDAY, MAY 16th

- 9:00 a.m.—**Internal Medicine** — John A. Pierce, M.D., Associate Professor of Medicine, Washington University School of Medicine, St. Louis, Missouri; Charlotte Bauer, M.D., Associate Clinical Professor of Medicine, University of California School of Medicine, San Francisco, California.
- 9:00 a.m.—**Obstetrics and Gynecology**—James R. Friedman, M.D., Assistant Clinical Professor of OB-GYN, Baylor University College of Medicine, Houston, Texas.
- 9:00 a.m. — **Urology** — Clair E. Cox, M.D., Associate Professor of Urology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, North Carolina.
- 1:30 p.m.—**Special Seminar on Trauma** — William F. Meacham, M.D., Clinical Professor of Neurological Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee; Edward L. Compere, M.D., Chairman of the Department of Orthopaedics, Northwestern, Chicago, Illinois; Alan P. Thal, M.D., Professor of Surgery, University of Kansas,



Kansas City, Kansas; John A. Pierce, M.D., Associate Professor of Medicine, Washington University, St. Louis, Missouri.

SATURDAY, MAY 17th

9:00 a.m.—**Ophthalmology - Otolaryngology**—Crowell Beard, M.D., Associate Clinical Professor of Ophthalmology, University of California School of Medicine, San Jose, California.

9:00 a.m.—**Radiology**—James J. McCort, M.D., Associate Clinical Professor of Radiology, Stanford University Medical School, San Jose, California.

9:00 a.m.—**General Surgery**—Allen P. Thal, M.D., Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kansas.

9:00 a.m.—**Psychiatry**—Richard Philipson, M.D., Director, Drug and Alcoholism Section, British Health Services, London, England.

1:30 p.m.—**General Practice**—Betsy Wolloch, M.D., and Ellidee D. Thomas, M.D., both of Tulsa, and Nelda Ferguson, Ph.D., Educational Psychologist, Oklahoma City Board of Education.

1:30 p.m.—**Anesthesiology**—William S. Howland, M.D., Chief, Anesthesiology Department, Memorial Hospital for Cancer and Allied Diseases, New York, New York, and

A. H. Giesecke, Jr., M.D., Associate Professor of Anesthesiology, University of Texas Southwestern Medical School, Dallas, Texas.

1:30 p.m.—**Dermatology**—Robert W. Goltz, M.D., Chairman, Department of Dermatology, University of Colorado School of Medicine, Denver, Colorado. □

## AMA Approves OU Family Medicine Program

The new family medicine program at the University of Oklahoma Medical Center is one of the first 15 in the nation approved by the American Medical Association under its recently adopted standards for resi-

dency training in family practice.

Doctors Preston Brogdon and Roger Lienke, family medicine directors, were notified by the AMA's Council on Medical Education that the residency program initiated last summer meets all requirements for graduate medical education in family practice set forth by the AMA in December.

Three young physicians are presently taking advanced training in family medicine at the medical center.

Their base of practice is the University Family Medicine Clinic, a model family practice unit which opened last June at 1600 North Phillips, adjacent to the Medical Center.

The Council on Medical Education, charged with review and certification of hospital residency programs, for years has recognized residencies in "general practice," which are hospital based programs.

Training for the new specialty of "family practice" is designed to prepare a physician to assume the primary responsibility for a family's continuing and comprehensive medical care. The emphasis is on experience in a model family practice office and community medicine rather than being restricted to in-hospital training.

The Council on Medical Education established family practice residency requirements with the concurrence of the American Academy of General Practice and the AMA Section on General Practice.

All the new residency programs are approved on a provisional basis and will be re-evaluated by a review committee later for continued full approval, Doctor Lienke said.

A family practice resident must spend a minimum of two years in training beyond medical school and internship. The procedures for certifying such physicians as specialists in family medicine are now being developed by national committees.

OU residents are Norman Haug, M.D., a graduate of the University of Colorado School of Medicine; Hodges Martin, M.D., from Southwestern Medical School, Dallas, and Don McHard, M.D., an OU medical graduate.

Three additional residents will begin training in July. □

## New York City To Host AMA Annual Convention

New York City will be the site of the American Medical Association's 118th annual convention, July 13th through 17th.

This will mark the third time in this decade that the nation's largest city has been the site of the meeting. In 1961 and again in 1965 the convention was held in New York City with an attendance exceeding 60,000.

A total registration of 60,000 is predicted for the 1969 convention, including some 22,500 physicians. Medical students, nurses and other members of allied medical professions, industrial exhibitors, and guests make up the rest of the registrants.

There will be four general scientific sessions at this year's meeting. They include: Human Sexuality, Physical Fitness and Aging, Impact of Medical Education on Patient Care, and Chronic Pulmonary Insufficiency and Air Pollution Problems. In addition, each of 22 scientific sessions will also present a program.

A special 23rd section is planned on special topics such as: Drug Utilization, Mental Health Dynamics and the Preschool Child, Disaster Planning for Aviation Accidents, Neurological Surgery, Nuclear Medicine, and Plastic and Maxillofacial Surgery.

Some information will be available to visitors in the comfort of their hotels or motels. This will be through the special televising of convention news, interviews, panels and scientific presentations. Such TV programming will be available mornings and evenings during the convention.

The entire scientific program for the 118th annual meeting will be featured in the May 26th issue of the *Journal of the American Medical Association*.

About 700 exhibits are planned, 300 of which will be concerned with scientific subjects.

Scientific activity will be at the Coliseum and the New York Hilton, and the House of Delegates will meet at the Americana. □



# death and taxes

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## Postgraduate Course in Sports Set For April

A postgraduate course in sports medicine sponsored by the American Academy of Orthopaedic Surgeons will be held April 7th-9th at the Skirvin Hotels, Oklahoma City, Oklahoma.

The three-day course of lectures and audio-visual demonstrations will be devoted to conditions of the knee in athletics and is directed toward orthopaedic surgeons. General physicians, high school and college team physicians, and others with a medical interest in the care of the athlete will be eligible to attend. It is to be sponsored by the Academy's Committee on Sports Medicine in cooperation with the Department of Orthopaedic and Fracture Surgery, University of Oklahoma School of Medicine, Oklahoma City.

Similar committee courses have been held in Oklahoma City during the past two years.

Chairman of the course is Don H. O'Donoghue, M.D., Chairman of the Orthopaedic and Fracture Surgery Department at the medical school. The faculty is composed of distinguished lecturers from nine states as well as members of the University staff.

Visiting lecturer will be Ian S. Smillie, M.D., Scotland, world-renowned authority on conditions of the knee. Professor of Orthopaedic Surgery, University of Dundee, Doctor Smillie is author of an authoritative text on the subject and will serve both as lecturer and panelist at the course.

Doctor O'Donoghue, nationally-known knee specialist, said that professional football, in particular, has targeted the knee as the most vulnerable, injury-prone area of the

body. Injury commonly occurs when a player is hit while his cleats are dug deep in natural sod.

"The main reason for so many recurring knee injuries in high school and college sports is that the athlete usually doesn't get quite the complete diagnosis he should when his knee is slightly damaged for the first couple of times, and subsequently, his knee injuries come much easier," he said.

Lecturers will discuss in depth topics including conditioning, diagnosis, postoperative care, and knee anatomy and physiology.

For application forms and further information, physicians are asked to write to Doctor O'Donoghue, 1111 North Lee, Oklahoma City, Oklahoma 73103, or the American Academy of Orthopaedic Surgeons, 430 North Michigan Avenue, Chicago, Illinois 60611. The course is approved for 28 hours of credit by the American Academy of General Practice. □

## GET INVOLVED IN OSMA!

The important activities of your association are carried out through appointed councils and committees—all members of the OSMA are encouraged to contribute to the organization by volunteering for service during the 1969-70 fiscal year. Indicate your interest by checking one or more of the following areas of interest, sign and mail to: President-elect, OSMA, P.O. Box 18696, Oklahoma City, Oklahoma 73118.

- |  |   |
|--|---|
| <input type="checkbox"/> Annual Meeting              | <input type="checkbox"/> Quackery               |
| <input type="checkbox"/> Bylaws                      | <input type="checkbox"/> Socio-economic         |
| <input type="checkbox"/> Medical School Liaison      | <input type="checkbox"/> Governmental Relations |
| <input type="checkbox"/> Professional Education      | <input type="checkbox"/> Claims Review          |
| <input type="checkbox"/> OSMA Insurance              | <input type="checkbox"/> Pharmacy               |
| <input type="checkbox"/> Public Relations            | <input type="checkbox"/> Public Health          |
| <input type="checkbox"/> Medical History             | <input type="checkbox"/> Alcoholism             |
| <input type="checkbox"/> State Legislation           | <input type="checkbox"/> Immunization           |
| <input type="checkbox"/> Laboratory Quality          | <input type="checkbox"/> Maternal Mortality     |
| <input type="checkbox"/> Interprofessional Relations | <input type="checkbox"/> Public Policy          |
| <input type="checkbox"/> Medical-Legal               | <input type="checkbox"/> Occupational Medicine  |
| <input type="checkbox"/> Medicine and Religion       | <input type="checkbox"/> Prepaid Medical Care   |
| <input type="checkbox"/> Nursing                     | <input type="checkbox"/> Others                 |
| <input type="checkbox"/> Osteopathy                  |   |

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\_\_\_\_\_(City)



## Legislative Report

The Oklahoma legislature has probably reached the half-way mark of the current session. Both the Speaker of the House and the President Pro Tempore of the Senate had promised that the First Session of the 32nd Legislature would be short.

Capitol observers are wondering if any of the major issues that disrupted the 31st session will even be discussed. Apparently the Democratic Legislature is waiting for Governor Bartlett to take the lead in trying to solve some of the state's critical problems. Normally, such issues as closing the rural schools, state supported kindergartens and the firing of highway officials would be sufficient to cause party lines to be drawn and scathing attacks to be made by each upon the other. But surprisingly little has been said, it's almost as if capitol hill was one big "romance."

One of the things that is unusual is the lack of controversial legislation to reach the floor of either house. It seems that an off-election year would be the best time to tangle with "knotty" problems. Voters would have time to forget, and politicians would have time to mend broken fences before election day. Not so—at least thus far in the session. No new revenue programs have been suggested, un-earmarking of funds has not been mentioned, no new education bills are in process. Those issues that could be controversial—the new consumer credit code, workmen's compensation and a constitutional convention are all being resolved in committee.

Apparently, the First Session of the 32nd Legislature is to be a "clean-up" session with as little controversy as possible.

### Medical Legislation

Several bills pending in the legislature could have grave effects on the medical community.

A bill to **require** graduating medical students to practice in towns with a population under 6,000 would certainly adversely affect the school's

enrollment. The fact that the bill was introduced indicates that, at least in the opinion of some, the problem of medical care in the rural communities is critical. It is doubtful that the bill will pass. But it does serve as a warning to the medical community that the problem needs attention.

The recent defeat of the "Medical Laboratory Licensing Act" (killed in committee) permits the continuation of the "status quo" in laboratory medicine and practice. The bill, supported by OSMA, would have established high standards for laboratories and personnel. Several attempts were made in committee to lower the educational standards for some of the personnel covered by the bill. Supporters felt that the high standards were necessary to "quality care." The Appropriations and Budget Committee of the House felt the bill was too controversial and are holding it until the next session.

H.B. 1369, regarding medical coverage by third party carriers, is probably the most dangerous medical bill introduced. The bill provides that any patient with a medical insurance policy, regardless of the type, may select any practitioner licensed under the healing arts to perform any service or procedure covered by the policy and furthermore, that the service or procedure may be performed at "... any hospital, doctor's office or clinic at the choice of the insured ..."

This act has not been placed on the committee agenda for debate.

A "Uniform Anatomical Gift Act" has been passed by both lawmaking bodies and has been signed by the Governor. H.B. 1054 is designed to clarify Oklahoma Statutes regarding donation of parts of the body and establishes a procedure for doing so.

OSMA's Legislative Committee is currently reviewing bills on workmen's compensation, ophthalmic licensure, required immunization, public health and mental health. Over 25 bills affecting medicine are of sufficient import to require committee action and position. □

## Hendren Elected To National Blue Shield Board



Scott Hendren, M.D., President of the OSMA, has been elected to the Board of the National Association of Blue Shield Plans. He will take office on April 18th to represent the ten southwestern states that make up District IX of the national organization.

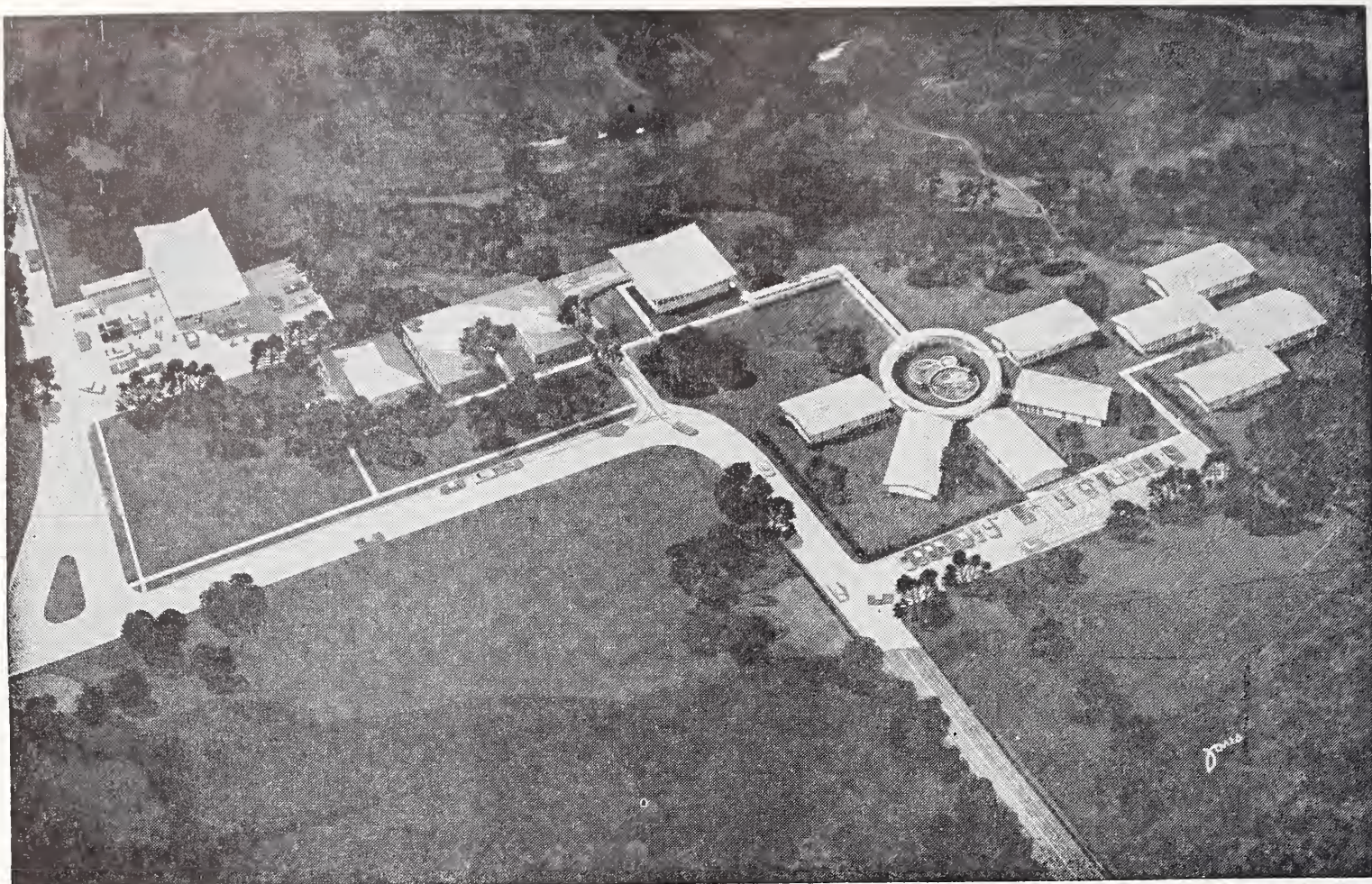
The Board is the governing body of all Blue Shield Plans throughout the world. It is made up of 33 directors, 11 of which must be M.D.s, 11 must be directors of local shield plans, and 11 are elected at large. □

## President-Elect Seeks Volunteers

OSMA President-Elect Hillard Denyer has issued a call for physician-members of the association to volunteer to serve on association committees and councils. In order to facilitate such volunteers, a clip-out coupon is located on page 124 of this issue of *The Journal*.

He will be called upon to appoint over 200 physicians. Denyer said that he wanted every association member to have the opportunity to contribute to the profession through service on important councils and committees. Moreover, he added that new leadership talent is always being sought by the OSMA. □





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**Chairman Carl Says  
Physician-Lawyer  
Relations Important**

“The legal and medical profession must work together for our mutual benefit, and for the benefit of our patients and clients,” stated Barton Carl, M.D., Chairman of the OSMA’s portion of the Medical-Legal Relations Committee.

Several years ago the OSMA and the Oklahoma Bar Association established a joint committee consisting of 11 physicians and 11 attorneys. The original purpose of the committee was to formulate a “Medical-Legal Relations Code” for the physicians and attorneys of Oklahoma. This code has now been adopted by the OSMA and the bar association.

Doctor Carl said, “We realize that this code is not complete, nor is it perfect. It is our desire to make it as complete and perfect as possible, but this takes time. We would appreciate suggestions from Oklahoma physicians for any improvement.”

The chairman went on to state that it was the desire of the joint committee that county medical societies and bar associations form joint committees and that they hold joint meetings for both educational and social purposes.

The continued improvement of the medical-legal relations code is important to a good relationship between the two professions. In 1968 the OSMA House of Delegates accepted a recommendation of the joint committee that the code be printed each year in the *OSMA Journal*.

**MEDICAL-LEGAL INTERPROFES-  
SIONAL CODE  
OKLAHOMA STATE MEDICAL  
ASSOCIATION  
AND  
OKLAHOMA STATE BAR  
ASSOCIATION**

**Preamble**

The current code of ethics of the medical profession and the cannon of ethics of the bar are hereby adopted by reference as though set out herein. The professions of law and medicine owe a mutual coopera-

tive duty to the courts and the American people. That duty and obligation is better executed when each profession has and exercises respectful understanding and cooperation. Justice is, and must always be our mutual goal, unhampered by ignorance, laziness, incompetence, perjury or self service at the expense of justice.

**Basic Considerations**

We recognize as basic that the ethical code of both professions must be adhered to; that freedom of choice for patient or client applies both to physicians and attorneys. We further recognize that an honest cooperative attitude is needed within each profession for the members thereof and that the greatest element necessary to the success of this inter-professional code is the exercise of the Golden Rule intraprofessionally by both physicians and attorneys. Emotional instability, egotistic self service, incompetence, flamboyant exhibitionism, dictatorial dominance, reckless and careless disregard for truth are likewise foreign and inimical to our mutual objective. The oath is a serious solemn vow not to be taken lightly nor handled carelessly. Justice, being our mutual goal, must never be sacrificed to satisfy personal convenience or monetary whims. Every litigant is entitled to his day in court, equal opportunity to present his claim unhampered by personal convenience or financial status. The physician is not a partisan in litigation and is devoid of bias, prejudice and personal interest and the attorney is the advocate representing his side of litigation to the best of his ability with an object of justice.

**Medical Reports**

Justice demands that all evidence necessary to establish the merits of litigation be available to the court and jury. The fact that it may be difficult to procure or inconvenient to present is no acceptable excuse for failure to do so. If an attorney presents to the physician an authorization and waiver for the release of medical records which is signed by

the patient client, the physician is obligated to provide access to or copies of such records. Inspection of original office records and photostatic copies of the same shall be furnished upon written request where the attorney assumes the necessary financial obligation. The physician on request with waiver duly signed by the patient client will furnish the the requested information. A reasonable time will be given for this. Consideration will be given to the convenience and time of the physician.

**Conference**

The ends of justice are better served when there is mutuality of understanding between attorney and physician. Conferences at different stages of litigation including pre-trial are recommended. Conference between attorney and physician should precede request for reports or the presentation of a subpoena, and a conference should precede court testimony. Arrangements for the conference by the attorney should be scheduled to best serve the convenience and conserve the time for both attorney and physician. The attorney will not attempt to influence the physician in any manner concerning examinations, reports, or the subject matter thereof.

**Subpoena**

The subpoena is a legal process to compel the attendance in court of a witness. Subpoena duces tecum is a subpoena ordering the witness to bring with him books, documents, office records, or other evidence described in the writ. The subpoena is a necessary and indispensable writ of justice. The physician will accept same and comply with its request. A physician may appear as a witness by agreement with the attorney or he must appear in response to a subpoena. The attorney, when he first finds it necessary to have a physician subpoenaed, should contact the physician beforehand telling him of the subpoena and explaining the necessity thereof. The subpoena of a medical witness, expert or otherwise, without notice, conference, and attempted understanding and agree-



ment as to compensation, will be considered improper conduct.

#### Medical Testimony—Expert

In many cases of litigation, especially personal injury, psychiatric and post mortem, justice requires the procurement and presentation of expert medical testimony. The Oklahoma State Medical Association will be cooperative in this matter of helping provide for all litigants the availability of expert medical testimony. The primary responsibility for this rests with the attorneys, but should they for any good and sufficient reason be unable to procure same, the Oklahoma State Medical Association will on written request cooperate to secure and furnish the names of qualified experts who will examine the client, make necessary reports and testify if necessary. Proper necessary conference and arrangements will be made by the attorney. In all cases, the convenience of the physician, the time and expense required to adequately perform the duties of the expert, and agreement in every particular concerning same must be reached. The medical expert is not an advocate, that being the exclusive role of the attorney, and he will therefore confine his remarks to his knowledge of the medical facts and opinion. Conference between physician and attorney should always be held in litigation requiring medical participation. The physician should be courteous to the cross-examiner, and vice versa. The dispatch of justice by the courts cannot be governed by the convenience of litigants, attorneys, witnesses, professional or otherwise. The physician is admonished to use language understandable to the jury avoiding, as much as possible, scientific terms and, where they must be used, explain their meaning in terms understandable to the jury. The attorney should not require the physician to wait around the court house before testifying. The attorney will, when possible, use expert witnesses out of term in order to facilitate. In testifying, the physician must answer

questions as concisely and objectively as possible, avoid bias favoritism or personal interest. Emotional flairs have little or no value in court; they lower the dignity of the proceeding and hinder the cause of justice. The examination of the medical witness should be conducted in a dignified and respectful manner. The relationship of attorney and physician should be founded on mutual respect, tolerance, courtesy, and candor. A physician should not advise on the monetary amount of damages a patient should seek to recover. It is recognized that there can be honest competent difference of opinion. Whenever possible, the physician shall be placed on telephone call to minimize time loss in court. The attorney shall not abuse, badger, browbeat nor humiliate any witness including a physician. Where any verified, written complaint is made by a member of either profession and where medical testimony or reports are of a wide variance, enough to raise the question of bias, prejudice, incompetence, perjury, or ignorance, this will, if thought necessary, be presented to the committee of the whole for proper evaluation and disposition.

#### Compensation

Physicians shall never participate nor testify on a contingent fee basis. His fee, nor the amount thereof, shall not be influenced by, nor dependent upon the outcome of the litigation. The attorney may, and frequently does, represent his client on a contingent fee basis. A reasonable charge to the patient or attorney by the physician may be made for conference, examinations, preparation and rendition of reports, review of office and hospital records and research of authorities, where necessary. If settlement is had at any stage of litigation, the attorney will use his efforts to secure payment of the physician's fees. Primary responsibility for the fee is the patient litigant. The fee shall be in accordance with the prevailing practice in his community for a similar service. The physician may elect to wait for his fee, reduce it, or cancel it altogether, but it must not be contingent

nor subject to fluctuation on the amount of recovery. The attorney will do everything ethical and reasonable to see that the physician is paid for his services and no charge shall be made to the physician for this service. The attorney, in dispensing money on settlement or after judgment, has an obligation to use his efforts to secure payment of the physician's fee. If the client refuses payment, the attorney should notify the physician promptly. The attorney, in a proper case, may advance payment to the physician as a reimbursable expense. At the time of his employment, the attorney may request authorization and assignment of his client for the payment of any and all medical fees in conjunction with the litigation, and that this assignment constitutes a lien on any settlement or judgment. Furthermore, a physician may request of the attorney that an authorization and assignment be obtained from the patient client for payment of any and all medical fees in conjunction with the litigation, and that a copy of such assignment be provided to the physician. A reasonable expert witness fee is a proper and necessary item of expense in litigation involving medical facts. When an attorney causes a physician to be subpoenaed to appear in any legal proceeding as an expert witness, the attorney will timely appraise the physician of the subpoena before service and shall take action requesting the court, if necessary, to allow compensation for services of an expert witness. In the matter of depositions, conference and agreement will be had by the attorney as to time, place and payment.

#### Joint Medical Legal Committee

The Medical and Bar Associations of the State of Oklahoma shall each appoint five members from their membership, who shall jointly constitute the committee. It is recommended that, when adopted by each profession, the committee membership terms be staggered from one to five years; that the committee meet quarterly, or as often as circumstance warrants; and that a



quorum of the committee shall be three members of each profession; that minutes of the meetings be kept and an annual report be made to each profession at its annual meeting; that chairmanship be elective and alternate between the professions. The joint committee shall:

(a) Diligently work for a better and improved relationship between the medical and the legal professions.

(b) Work with the courts to improve the administration of justice.

(c) Cooperate to the end that all litigants will have their day in court, unhampered by financial status, race, creed or religion.

(d) Consider inquiries or written complaints from either profession, attempt to answer or harmonize them and, where circumstances justify, refer same with or without recommendations to the grievance or other appropriate committee or body of one or both professions for consideration.

(e) Promulgate such procedures or suggestions as found necessary to make effective the objectives of the committee.

(f) Report annually to each profession the work of the committee, with any recommendations for improvement. □

## **OSMA Insurance Council Announces Dividend**

Favorable loss experience on the OSMA sponsored professional liability program has earned the association members a dividend for 1968. The dividend was announced by Insurance Company of North America representatives at a meeting of the Council on Insurance on February 16th.

Mr. Tom Haynes, Claims Manager of INA, presented a detailed report on the professional liability loss picture covering the first two-years' experience with the INA program. The report showed that losses in the first two years have been exceptionally low and have earned the OSMA members participating in the program a dividend amounting to approximately ten percent of their premium.

Dividend checks are being calculated by the INA and should be issued in the near future. The checks will be sent to the Executive Office of the OSMA and then distributed to the membership.

During the meeting of the council the OSMA staff outlined a claims prevention program to be implemented by the INA and OSMA. The program will be built around a claims prevention booklet that was compiled by the OSMA. The booklet should be ready for distribution prior to the OSMA Annual Meeting in May.

Other aspects of the prevention program included the holding of a series of short courses for small groups of INA insured doctors in the high risk metropolitan areas, and special programs on malpractice to be carried out in the next year in other cities in Oklahoma. For the small county medical societies, a good professional liability movie will be circulated for showing at society meetings and the OSMA is considering the feasibility of producing a filmed panel discussion on the subject.

The council recommended that the OSMA Newsletter carry a regular feature concerning aspects of malpractice and that material from the the claims prevention booklet be used in preparing the articles. The council also recommended that the Medical-Legal Relations Committee work actively to encourage all county medical societies to institute an annual physician-lawyer dinner in their area.

The claims prevention booklet will be divided into three major sections: Malpractice Prophylaxis, Important Doctrines of Law, and Medical-Legal Forms. The prophylaxis section will contain a list of legal "rules of thumb" that a physician should use in his everyday practice of medicine. The section on "Important Doctrines of Law" will discuss some of the areas of the law that appear in malpractice cases. The council felt that the "Medical-Legal Forms" section was the most important in the booklet. It will be made up of a selection of consent and release forms

that the physician should use in his practice of medicine. The forms have been carefully screened by the American Medical Association and by legal counsel for the OSMA before being included in the booklet.

Mr. Rod Frates, insurance consultant for the OSMA, reported to the council that over 200 OSMA members had voluntarily elected to purchase the Insurance Company of North America's umbrella liability policy as a supplement to their basic professional liability program. The umbrella policy, known as XIC, will carry the excess limits liability from \$100,000 to \$1 million on malpractice and to \$1 million on other risks. Since the INA has expressed its willingness to enter into a sponsorship contract with the OSMA, the Council on Insurance is negotiating with the company. Such a sponsorship would make a 15 percent dividend available to those OSMA members who desired this extra coverage.

It is the intention of the council that sponsorship of the XIC program will not affect the physician's right to purchase more than the minimum professional liability limits on his professional liability insurance policy. The Council on Insurance has made it very clear that the purchase of the XIC program is not a condition for obtaining adequate professional liability coverage; rather, XIC simply represents an option for those who desire a broader base for excess limits liability protection.

The XIC program is an umbrella type policy designed to offset insurance losses in excess of the limits of other policies that an individual might carry. For a physician, it not only increases his malpractice liability coverage, but also extends to his automobile, home, and other types of insurance.

Unlike the ten percent dividend being offered to Oklahoma physicians under the basic malpractice coverage, the 15 percent dividend on the XIC policy is based on a nationwide loss experience. However, Mr. Frates pointed out that the Insurance Company of North America and its subsidiaries have never failed to pay a dividend. □



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## Hospital and Welfare Commission Work Out Medicaid Payments

An agreement between the Oklahoma Hospital Association and the State Department of Public Welfare has been worked out concerning reimbursement for hospital care for eligible welfare recipients under the Medicaid (Title XIX) program. It was agreed that hospitals would be reimbursed on their current cost for the number of allowable compensable days on the same basis as they are paid for Medicare (Title XVIII) patients.

Oklahoma hospitals and the Welfare Department found themselves at odds when the Department cancelled all contracts with hospitals effective November 30th, 1968 in an effort to negotiate a rate that would pay many hospitals less than their current cost. Welfare officials stated at the time that the reason that they cancelled the contract is that it did not appear that they would have adequate money to pay the hospitals their retroactive payments at the end of each hospital's fiscal year as provided under their former contract.

Since January 1st, 1966, hospitals have been paid their current audited cost, based upon a contract which provided for retroactive payments at the end of the hospital's fiscal year if the interim payment paid by the department did not equal actual year-end costs.

In order to continue the program while negotiations were going on between the Oklahoma Hospital Association and the Welfare Department, a 90-day interim contract was agreed upon by the hospitals and the Welfare Department.

Hospital administrators contended that the Welfare Department must pay hospitals their current costs during the compensable period and recommended that the Welfare Department reduce their scope of program by limiting the number of compensable inpatient hospital days within the available funds.

Hospital administrators were contending that the 110 percent formula

would not adequately cover the expectations for rising operational costs, and that any deficit in welfare reimbursement would have to be passed on to the private patient.

In late January it was announced by the Oklahoma Public Welfare Commission that there had been a slight increase in the state sales tax and it was thought that the department would be able to enter into contracts with the hospitals to reimburse them their "current" cost on the same method that the department paid hospitals prior to November 30th, 1968. This, in effect, would mean that hospitals would be paid on the same basis for Title XIX (Medicaid) recipients as they are being paid by Title XVIII (Medicare). The agreement also provides for retroactive payments computed on the basis of "current" cost at the end of the hospital's fiscal year, at which time the hospital will submit an acceptable statement of reimbursable costs, as was done prior to November 30th, 1968. Based on this statement, retroactive adjustment payments will be made to the hospitals by the department, or in the case of overpayment to the hospitals, by the hospitals to the department.

It was also agreed that hospitals will be reimbursed only for the first ten days per admission for adult welfare recipients. There will be no limit on days per admission for children under the age of 21. The hospital association has expressed its hope that the ten day limitation can be extended in hardship cases.

During the negotiations, the Oklahoma Hospital Association's Executive Director, Cleveland Rodgers, had an opportunity to meet with Governor Dewey Bartlett, Senate President Pro Tempore Finis Smith, and Speaker Rex Privett of the Oklahoma House of Representatives. At this meeting he stressed to the leaders that even if hospitals are paid "current costs" for ten days per admission per adult recipient, the hospitals would not recover their actual costs for caring for Medicaid recipients because so many of them stay beyond the ten-day period.

In a letter to the OHA Board of

Trustees, Mr. Rodgers stated, "I think it was most helpful that we were able to meet with the Governor and the legislative leaders and discuss the precarious financial position of hospitals in the state because we were also able to explain to them why hospital costs have accelerated and will continue to accelerate in the near future." □

## Associate Executive Named Outstanding Young Man

OSMA'S Associate Executive Director, David Bickham, has been named as the Jaycee's "Outstanding Young Man of Edmond, Oklahoma."

The presentation was made to Bickham early in February by the Edmond Jaycees when they presented him with the Edmond Chapter's Distinguished Service Award. This award is presented to a young man between 21 and 36 years of age who has performed exceptional service to his community and fellow man.

In making the presentation, it was pointed out that Bickham is serving as chairman of the YMCA Board of Management, has served as vice-chairman, is a past Jaycee president, is active in his church and profession, has served as a member of the Edmond Citizens Advisory Committee, is a member of the Chamber of Commerce Board of Directors and a past vice-president, and is a member of the Edmond Recreation Council.

In addition, David has announced that he will seek a seat on the Edmond City Council. In deciding to make the race for Council, Bickham said he has a continuing interest in the affairs of Edmond and "this is an extension of that interest."

He is a six-year resident of Edmond and came to that city from Baton Rouge, Louisiana. He was employed as a sales manager for Henderson Homes for two and one-half years and then became a loan officer for the Oklahoma Mortgage Company. He left that position about a year ago to become an associate executive director for the state medical association shortly after the death of Mr. Dwight Whelan. □



## DEATHS

### MARVIN S. TERRELL, M.D.

1912-1969

Marvin S. Terrell, M.D., Fairfax physician for the past five years, died January 26th, 1969. He was a native of Crowder, Oklahoma, and graduated from the University of Oklahoma School of Medicine in 1942.

Following his internship in Wichita, Kansas, Doctor Terrell served as Director of the Oklahoma County Health Department before moving to Buffalo, Oklahoma. After 14 years of practice there, he moved to Fairfax.

### JOHN R. TAYLOR, M.D.

1905-1969

John R. Taylor, M.D., a 1934 graduate of the University of Oklahoma School of Medicine, died in Kingfisher, January 31st, 1969.

A native of Millerton, Indian Territory, Doctor Taylor served a two-year internship in Oklahoma City and then established his practice in Kingfisher. He was a member of the Board of Directors of the Oklahoma Medical Research Foundation, the Oklahoma City Academy of Medicine and the Oklahoma Chapter of the American Academy of General Practice.

### T. BURKE TRIPLETT, M.D.

1885-1969

A pioneer Mooreland, Oklahoma physician, T. Burke Triplett, M.D., died February 13th, 1969. He was a 1912 graduate of the Chicago College of Medicine and Surgery. The same year, he moved to Mooreland where he practiced until his retirement in 1965.

Doctor Triplett had served his county medical society as president and was honored with the presentation of a Fifty-Year Pin from the OSMA for over a half century of service to his profession.

### WILBURT F. LEWIS, M.D.

1911-1969

Wilburt F. Lewis, M.D., 57-year-old Lawton urologist, died February 7th, 1969. A native of Lawton, he graduated from the University of Oklahoma School of Medicine in 1939. Following his internship in New Jersey, his private practice was established in Lawton.

Active in medical affairs, Doctor Lewis had served as a Trustee and Vice-President of the Board of Directors of the Oklahoma Medical Research Foundation and as a Past-President of the Alumni Association of the University of Oklahoma Medical Center.

### RAY U. NORTHRIP, M.D.

1909-1969

An Ada pathologist since 1949, Ray U. Northrip, M.D., died January 21st, 1969, in Ada. A native of Weatherford, Oklahoma, he was graduated from the University of Oklahoma School of Medicine in 1936. After serving four years as a medical missionary in Nigeria, he served with the medical corps during World War II. In 1949, he established his private practice in Ada where he was active in both medical and civic affairs.

Doctor Northrip was a past-president of the Oklahoma Pathologists Association and a Fellow of the College of American Pathologists. □

## Forum On Cancer Set For April

The Arkansas and Oklahoma Divisions of the American Cancer Society are sponsoring a physicians' forum on the various sites of cancer, according to Adolph N. Vammen, M.D., Oklahoma chairman of the activity.

"This will be the first intensive scientific professional education activity sponsored jointly by the two Divisions of the American Cancer Society," Doctor Vammen said. "We plan to make it an annual program to assist in keeping our Arkansas and Oklahoma physicians abreast with the advances made in the diagnosis and treatment of cancer. Many breakthroughs are coming from our research laboratories and we want our physicians versed in the latest and most effective treatment known."

Eight speakers from across the nation and six physicians from the University of Oklahoma Medical Center will complete the list of participants for the two-day meeting.

The course has been approved by the American Academy of General Practice for six (elective) hours.

The meeting will be held at Arrowhead Lodge, Lake Eufaula (south Canadian) Friday and Saturday, April 11th and 12th, 1969. It is open to all physicians. There is no registration charge. There will be a planned luncheon Friday with a social hour and dinner Friday evening. Additional information may be obtained by contacting Doctor Vammen, Oklahoma Division, Inc., American Cancer Society, 1312 N.W. 24th Street, Oklahoma City 73106, or the Arkansas Chairman, Arthur F. Hoge, Jr., M.D., Arkansas Division, Inc., American Cancer Society, P.O. Box 2296, Little Rock, Arkansas 72203.

A Program Agenda will be made available to all Oklahoma and Arkansas physicians. □



## Miscellaneous Advertisements

**OFFICE SPACE FOR LEASE.** Very attractive offer for pediatrician or general practitioner. Others considered. Ready for immediate occupancy. Terms flexible. Office new, well equipped, and in most growing area of Oklahoma City—Quail Creek. Contact Dan E. Chesnut, M.D., SK 1-3524. Office location—2800 Hefner Road.

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**PHYSICIAN, AGE 36**, rotating internship, board eligible in internal medicine, six years private practice, seeking association with established physician or group in Oklahoma City or Norman area. Write Harold Berliner, M.D., 1320 N.E. 55th Street, Oklahoma City, Oklahoma or phone in the evening, 405 427-6711.

**TWO INTERNISTS**—Board eligible or certified, wanted by multi-specialty group in Central Texas associated with 100-bed hospital; \$20 — \$24,000 annual salary; early partnership; no investment. Write G. H. Wahle, Jr., M.D., King's Daughters Clinic, Temple, Texas, or call collect 817 778-5501.

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**RECENTLY COMPLETED CLINIC** space allows us to expand services. If you are an internist, general practitioner, urologist, orthopedist, ophthalmologist, otolaryngologist, or clinical psychologist, we invite you to investigate this life-lengthening practice opportunity. Write or call Robert E. Herndon, M.D., Chief of Clinic Staff, Box 1069, Chickasha, Oklahoma 73018.

**FAMILY SERVICE DOCTOR** to locate in Ringling, Oklahoma. Population 1,500, trade area 3,000. Eight room, remodeled, centrally heated and cooled clinic furnished free of rent. Wonderful opportunity to be of service and prosper financially. Call collect 405 662-2364.

**WANTED: GENERALIST** to take over established practice. This is a fully equipped clinic, fine hospital one mile. Records available. We offer small town living at its best, close to outdoor recreation, right in the heart of wealthy wheat and cattle country. Housing is available. This is an opportunity for a rapid start and a desirable practice is assured. Reasonably priced and immediate possession possible. Contact Key T, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

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**IS YOUR CALENDAR MARKED FOR MAY 15th, 16th and 17th, 1969?**

**PLAN TO ATTEND THE ANNUAL MEETING OF THE OKLAHOMA STATE MEDICAL ASSOCIATION**  
Tulsa Assembly Center  
Tulsa, Oklahoma



# So he'll breathe easier: relieve anxiety while you relieve pain.

Relief of pain is usually a major goal in traumatic conditions. But often of importance, too, is alleviation of anxiety and tension that may heighten patient discomfort.

Single-prescription, non-narcotic Equagesic may effectively relieve pain. *And* ease anxiety and tension.

## TABLETS

# Equagesic<sup>®</sup>

(meprobamate and ethoheptazine  
citrate with aspirin)



## IN BRIEF.

**Contraindications:** History of sensitivity or severe intolerance to aspirin, meprobamate or ethoheptazine citrate.

**Warnings:** **USE IN PREGNANCY:** Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

**Precautions:** Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics—has resulted in dependence or habituation. Withdraw gradually after prolonged excessive dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance, with resultant slowed reactions and impaired judgment and coordination. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, patients should not operate machinery or drive. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously and in small amounts to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with gastric lavage and appropriate symptomatic therapy (CNS stimulants and pressor amines as indicated). Two instances of accidental or intentional significant overdosage with ethoheptazine and aspirin have been reported. These were accompanied by CNS depression (drowsiness and lightheadedness) but resulted in uneventful recovery. On basis of pharmacologic data, CNS stimulation could be anticipated, with nausea, vomiting and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]).

**Adverse Reactions:** Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress, in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

**Overdosage:** See precautions section for management of overdosage.

**Composition:** 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa.

Photo professionally posed.



The Oklahoma Council on Health Careers has been functioning most effectively for over a year now by, to quote from the By-Laws: "coordinating, developing, facilitating, maintaining and promoting programs or other activities calculated to interest individuals in choosing and preparing for careers in the Health Services."

At the present time the OCHC has ten participating members and 23 associate members. Participating members are professional associations or organizations whose dues and representation on the board of directors are based on membership number. An associate member may be an individual or an organization that contributes financially and supports the OCHC objectives.

Since organization, the office of OCHC at 824 N.E. 15th Street, Oklahoma City, has been a busy place; Kenneth Hager, executive director, reports that over 10,000 student inquiries for health career information have been answered. "A Directory for Scholarships, Loans and Grants Available to Health Career Students" has been compiled and released. Most recently a "Directory of Films on Health Careers" and a current "List of Health Career Coordinators" who will assist the OCHC in exposing young people to the opportunities in the health field has been compiled and distributed.

Continued statewide support of the OCHC is essential and should be encouraged. Attendance at the state Health Science Career Days sponsored by the University of Oklahoma Medical Center in cooperation with the OCHC should also be encouraged. At this writing two have been held and the last one this year will be April 18th. There is a limited registration of 150 per day with a three weeks advanced filing.

County auxiliaries through their Health Career chairmen are encouraged to sponsor local Health Science Career Clubs and plan and conduct regional Health Career Days; "Guidelines for Health Career Days" can be obtained from OCHC. Health Science Career Club Charters and membership cards can also be obtained from the OCHC office.

A survey on the number of students graduating from health career schools in Oklahoma is being conducted and responses to questions sent out late last fall to county health career chairmen would be greatly appreciated.

Visit your OCHC office when you are in Oklahoma City; you continue to be responsible for the growth, direction, and development of future activities of this council. □

*Mrs. Port Johnson,  
State Health Careers Chairman*



"Always on Tuesday" is the slogan for the Medical Television Series sponsored jointly by the OSMA, Office of Postgraduate Education at the University of Oklahoma Medical School and the Oklahoma Educational Television Authority. Programs appear on channels 11, Tulsa, and 13, Oklahoma City every Tuesday at 7:00 a.m. and 9:30 p.m. The program for March 25th will be "Acute Respiratory Failure: Recognition and Management."

**Family Medicine, a new specialty**, was officially recognized by organized medicine when the Advisory Board for Medical Specialties and the Council on Medical Education of the AMA approved a specialty board in family practice. With the new specialty, 20th of the profession's primary specialty groups, the family doctor himself now becomes a specialist in his own right.

**Memorials or Resolutions to be considered** by the House of Delegates meeting in May will be due in the OSMA Executive Office no later than April 16th. The bylaws of the state association specify that a memorial or resolution may be initiated by a component society or by any member of the association and that they must be filed with the Executive Office of the association at least 30 days prior to the meeting at which they are to be considered. The OSMA House of Delegates will go into its annual session on May 16th at the Tulsa Civic Assembly Center. To be considered, a memorial or resolution must be signed by the secretary of the initiating component society or by the initiating member.

**Chiropractors Fight Back:** A review of legislation introduced so far in the 91st U.S. Congress reveals that there have been at least 23 bills introduced in the House and one in the Senate, which would amend Part B of Medicare to provide for payment for the services of chiropractors. This spate of legis-

lation was introduced in spite of a recent report by the HEW Study Committee which recommends that chiropractors remain excluded from the program. In transmitting the report, former HEW Secretary Cohen in effect recommended that chiropractors never be included on the basis that their education and basic approach make them unable to give quality care. It is apparent that pressure will be exerted by the chiropractors to have Congress act favorably on this legislation.

**John R. Danstrom, M.D., of Oklahoma City**, has been elected Vice-President of the American College of Radiology. He is head of Radiology at Mercy and South Community Hospitals in Oklahoma City, and a member of the staff and an associate professor of radiology at University Hospital. Doctor Danstrom is completing a three-year term on the Board of Chancellors of the College.

**"Private Practice," a new magazine for physicians**, rolled off the presses during February. The magazine is published by the Congress of County Societies and is sent, free of charge, to each physician-member of a county society that belongs to the congress. According to Mr. Mickey Edwards, Editor of the magazine, 50,000 copies of the first issue were distributed. The Congress, known as CCMS, has been in existence less than four years. Publisher of "Private Practice" is Francis A. Davis, M.D., of Shawnee, Oklahoma, and the editorial office is in Oklahoma City. In a publisher's report in the first issue of the magazine, Doctor Davis said, "We believe our journal will provide the practicing physician with the information he needs to help him maintain his freedom of practice. And, by providing the doctor with facts about the drug industry, hospitals, and the other allied health fields, we can help make him an informed defender of freedom in all areas of medicine."

**Get Involved in the OSMA!!** Incoming President of the OSMA, Doctor Hillard Denyer is conducting a talent search for physicians who wish to become active in the important committee work of the association. A coupon is printed on page 124 of this *Journal* for your use in selecting and volunteering for specific areas of interest. □



The

JOURNAL

APRIL  
1969  
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of the Oklahoma State Medical Association

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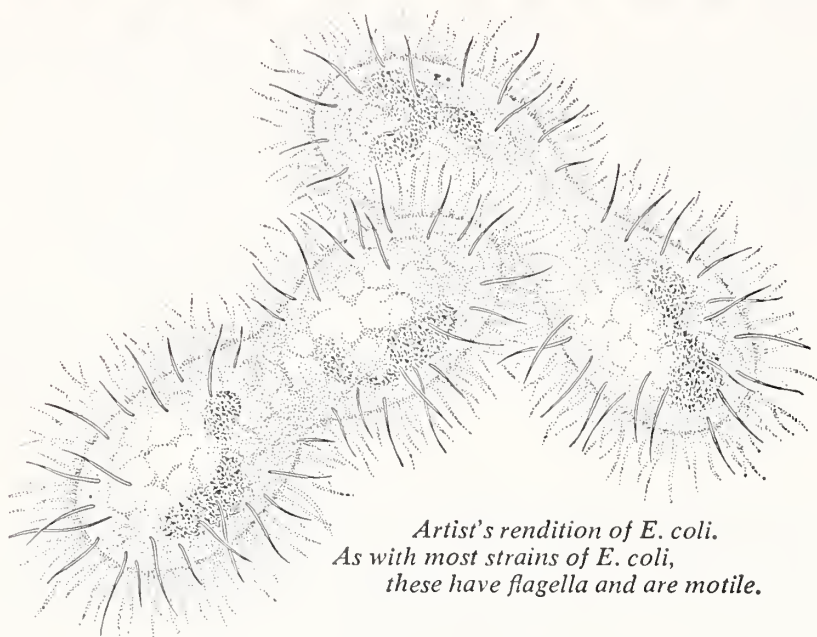
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# To help avert chronicity in acute cystitis



*Artist's rendition of E. coli.  
As with most strains of E. coli,  
these have flagella and are motile.*

Although it may coexist with chronic pyelonephritis or prostatitis, many cases of chronic cystitis may result from incomplete treatment of a simple, acute cystitis. For this reason, it is being increasingly recommended that appropriate antibacterial therapy in full dosage be maintained for up to two weeks or longer.

Most frequently, the dominant pathogen is gram-negative, usually *E. coli*; most often, you will find Gantanol® (sulfamethoxazole) effective against *E. coli* and other sensitive organisms—gram-positive and gram-negative—commonly seen in cystitis and other urinary tract infections. Wide clinical usage of Gantanol has confirmed the efficacy of this wide-spectrum antimicrobial agent in the treatment of cystitis.

The rapidity of bacterial multiplication in a favorable urinary environment is well known. Prompt control of acute bladder infection is therefore essential.

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Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Acute and chronic urinary tract, respiratory and soft tissue infections due to susceptible microorganisms prophylactically following diagnostic instrumental procedures on genitourinary tract.

**Contraindicated** in sulfonamide-sensitive patients, pregnant females at term, premature infants, or newborn infants during first 3 months of life.

**Warnings:** Use only after critical appraisal in patients with liver or renal damage, urinary obstruction or blood dyscrasias. Deaths reported from hypersensitivity reactions, Stevens-Johnson syndrome, agranulocytosis, aplastic anemia and other blood dyscrasias. In close intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed. Clinical data insufficient on prolonged or recurrent therapy in chronic renal diseases of children under 6 years.

**Precautions:** Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections. Sulfonamides not recommended



## *Medical Care: Not A Chattel*

**A** FAVORITE EXPRESSION of agencies and individuals involved in the business of making money available for the costs of medical care is "... providing health (or hospital or medical or professional) care (or services or treatment)." The expression is so popular and has come into such general use that it no longer is recognized as inaccurate and misleading. It is apparent that many people who use the expression, and even more people who hear it believe, in fact, that the act of making money available for professional health care is the same as providing that care.

The widespread misconception concerning the source of medical care has promoted the lay view of medical care as a public utility and the professional view of medical care as a market-commodity, a chattel. Obviously, both views are wrong. Not only are they wrong, but they are mutually antagonistic. Such misunderstanding will encourage an ever-broadening conflict and, at the same time, frustrate the realization of the objective which is common to all parties involved in the struggle; making available to all members of our society the best possible health care and services.

It is fundamental to understand that medical care is not provided by agencies or organizations or hospitals or insurance companies or drugs or machines or computers. Medical care is provided by people.

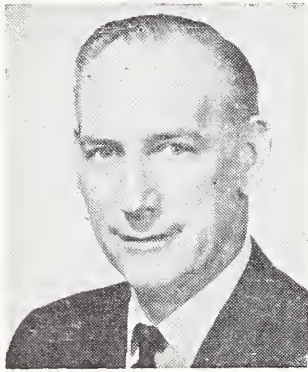
Also, it is fundamental to understand that, although medical care is comprised of many elements, the single most essential and in-

dispensable element is time. Every program of medical care, whether designed for an individual or a nation, requires the expenditure of unpredictable and widely variable amounts of time by physicians and those who assist physicians in carrying out the program. Time is the essence of medical care and its expenditure cannot be forecast or compromised in any conscientious program.

Although the availability of money may determine how carefully and thoroughly the need for medical care is evaluated and to what extent it will be rendered, it can never provide the personally acquired and personally delivered skills essential to the entity of medical care. These skills must be provided by the people who possess them and who voluntarily devote their time to the recipients of the care. These skills and talents cannot be bought and sold; they must be offered and accepted. They cannot be manufactured or guaranteed; they must develop in an intellect and be perfected by a conscience. They cannot be produced on an assembly line; they must evolve as the fortunate result of motivation, ability, hard work and courage. They are valuable natural resources and, unfortunately, exhaustible. They can never be appraised on the auction block by an unenlightened public or an unprofessional, dollar-involved auctioneer.

Money cannot buy medical care and institutions cannot provide it. Medical care is provided by people who possess special skills and because of this, have special obligations to society. It is crucial that our public and our colleagues clearly understand these facts and carefully analyze their significance.—MRJ □





To you, the members of the Oklahoma State Medical Association, I tender my gratitude for serving as your president for the past year.

The task loomed a year ago as an awesome responsibility; in these closing days, I more fully appreciate the responsibility that each of us holds in being physicians.

This office has been ever-demanding, often frustrating, but infinitely rewarding—bringing a fuller understanding and a deeper appreciation of the closeness of our profession.

Thank you for the support you have given your association this past year and for the support and dedication that you will lend to the tasks and challenges that lie ahead in the future.

Sincerely yours,

*Scott Henderson, M.D.*



# The Emergency Treatment of Nosebleed

KINSEY M. SIMONTON, M.D.

*The location and control of bleeding from a point in the depths of a narrow cavity challenges the skill of the physician. This "cookbook" article suggests methods for meeting the challenge.*

**A** NOSEBLEED that does not stop spontaneously within a few minutes is an emergency. Prompt and effective treatment requires previous planning, organization, and certain essential equipment and supplies.

## EQUIPMENT

Treatment of nosebleed is most convenient when the patient is seated in a chair. The erect posture allows expectoration of blood with minimal delay. The patient's head should be supported by a headrest or by the physician's assistant (figure 1). The patient with nosebleed is apprehensive, and without support it is difficult to avoid drawing away from a painful stimulus.

Adequate illumination is essential. Visualization of a deep, narrow recess such as the nose requires a system in which the light rays parallel the line of vision. This is provided by a concave head mirror or any one

Mayo Clinic and Mayo Foundation: Section of Otolaryngology and Rhinology.

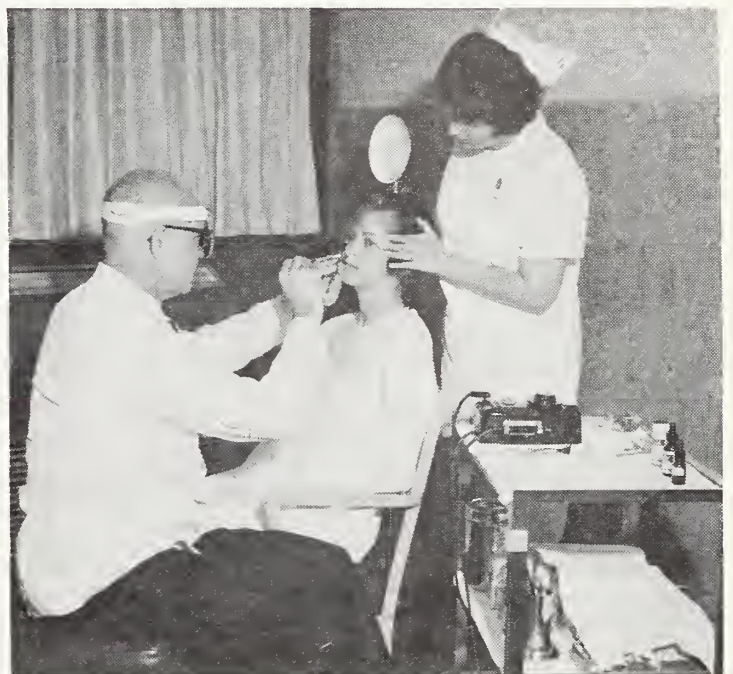


Figure 1. Position of patient and instrument table.

of several available head lamps. The concave mirror produces a beam that converges to a focal point and then diverges. Maximal illumination is achieved when the focal point is at the external nares (figure 2).

Adequate suction equipment is equally essential for examination of the bleeding nose. An electric-driven suction pump with a trap in the suction line to prevent blood from entering the pump is very satisfactory and is readily portable. Water-powered pumps permanently installed in the office provide adequate suction. The suction cannula should have an external diameter of approximately three mm and an internal diameter of two mm. This cannula will reach into most regions of the nose, and the lumen is adequate



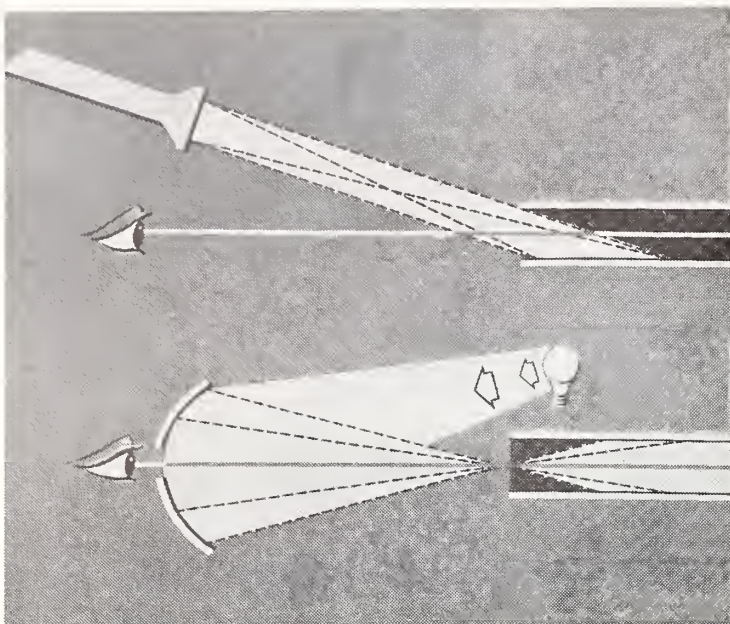


Figure 2. Diagram showing visualization of deep cavity by reflected light. From Simonton, Kinsey M.: Diseases of the Eustachian Tube, Tympanic Membrane, and Middle Ear. In Maloney, W. H.: Otolaryngology. New York, Hoeber Medical Division, Harper & Row, Publishers, Inc. By permission of the publisher.

to pick up partially clotted blood. Smaller cannulae should be available for use in children or in narrow noses. Rubber catheters are not satisfactory, as they cannot be directed to a specific point within the nose. Two models of suitable cannulae are illustrated in figure 3. The catheter illustrated is for placement of a postnasal pack. The dressing forcep illustrated is a six-inch bayonet type. The bayonet forcep is preferred, as it avoids blocking the vision with the fingers. Equipment and supplies are illustrated in figure 4 and listed in tables 1, 2, and 3.

#### STEPS IN CONTROLLING BLEEDING

The first step in controlling nosebleed is to minimize pain. Morphine given subcutaneously in adequate dose is ideal. Topical anesthesia is achieved by use of cotton pledgets moistened in a solution of cocaine ten per cent, nine parts, and 1/1,000 epinephrine

Table 1. Equipment Needed for Acute Nosebleed Program.

Chair with headrest	Nasal speculum (insulated)
Light	Nasal suction tips
Head mirror	Bayonet forceps
Suction	Cotton carrier (metal)
Cautery	Hemostat
Bib	Tongue blade
Basin	Catheter (No. 12 French)

Table 2. Materials Needed for Acute Nosebleed Program.

Absorbent cotton
"Vaseline" gauze (1 inch)
"Vaseline"
Oxycel
Gauze squares
Fishline
Adhesive tape

Table 3. Drugs and Other Aids Needed for Acute Nosebleed Program.

Morphine	Sedatives
Cocaine (10%, 9 ml) and	Blood
adrenaline (1/1,000, 1 ml)	Iron
Adrenaline (1/1,000)	Time
Silver nitrate	

one part. These pledgets are placed in the nose during search for the bleeding area and serve to induce anesthesia, to shrink the mucosa, and to isolate the region of the nose under investigation.

The blood vessels of the nose traverse the submucosal tissues, forming dense plexuses of erectile tissue on the turbinates. The turbinates are rarely the site of bleeding. Rather, bleeding occurs from the anterior septum where the mucosa is dried excessively by respired air, from the points of entry of major vessels, the anterior ethmoidal artery at the anterior part of the roof of the nose and the sphenopalatine artery at the postero-superior region and from a plexus of veins on the postero-inferior lateral wall under cover of the inferior turbinate, often referred to as Woodruff's plexus.

The second step in controlling nosebleed is to identify the site of the bleeding. When

*Since his graduation from George Washington University School of Medicine, Kinsey M. Simonton, M.D., has been certified by the American Board of Otolaryngology. He is now Professor in Otolaryngology at the Mayo Graduate School of Medicine.*

*Among Doctor Simonton's organizational affiliations are the Communicative Disorder Research Training Committee, the National Institute of Neurological Diseases and Blindness, the American Academy of Ophthalmology and Otolaryngology, the American College of Surgeons and the American Triologic Society.*



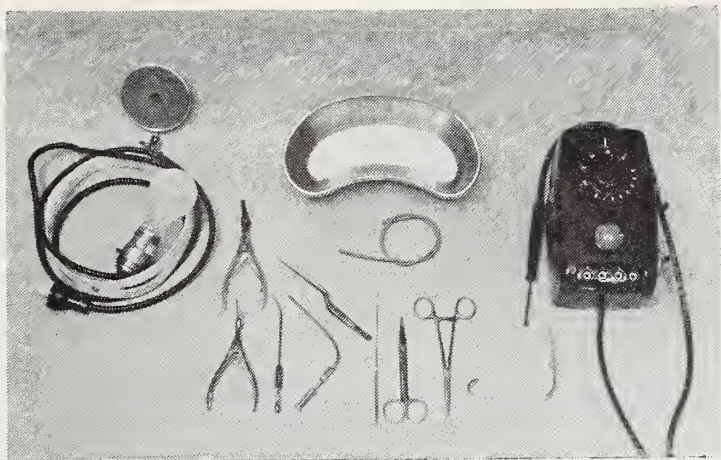


Figure 3. Equipment used in treatment of nosebleed.

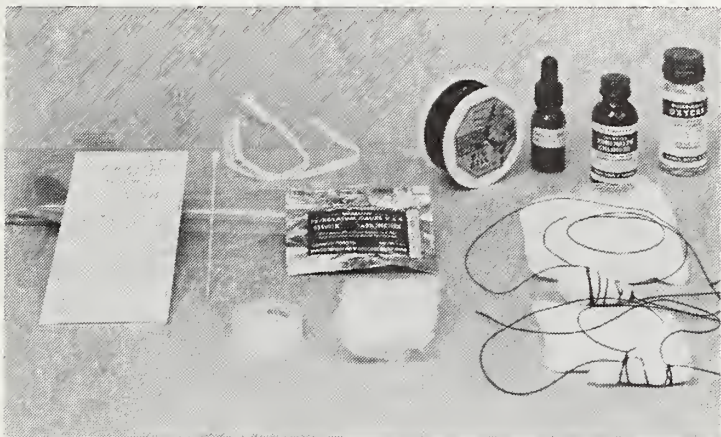


Figure 4. Supplies used in treatment of nosebleed.

the patient is seated, blood in the nose tends to flow in a downward and backward course to the nasopharynx. The nose is approached at its antero-inferior quadrant where bleeding is almost always from the septum. During inspection, tampons eliminate flow from other regions of the nose. Suction is used to clear away excess blood and clots. After inspection of the antero-inferior region, the tampons, which are moistened in cocaine-adrenalin solution, are advanced to block flow from the posterior to the anterior part of the nose. Suction to clean the nose enables the antero-superior quadrant to be inspected for bleeding from the anterior ethmoid artery. If bleeding is not occurring from this artery, the tampons and suction are advanced to clear the postero-superior region of the nose, and a search is made for a bleeding point from the sphenopalatine artery. Finally, the postero-inferior region is inspected (figure 5).

With exception of the anterior septum, actual bleeding points are rarely seen. It is usually impossible to locate the source except during active bleeding. Extended search after bleeding has stopped is meddlesome.

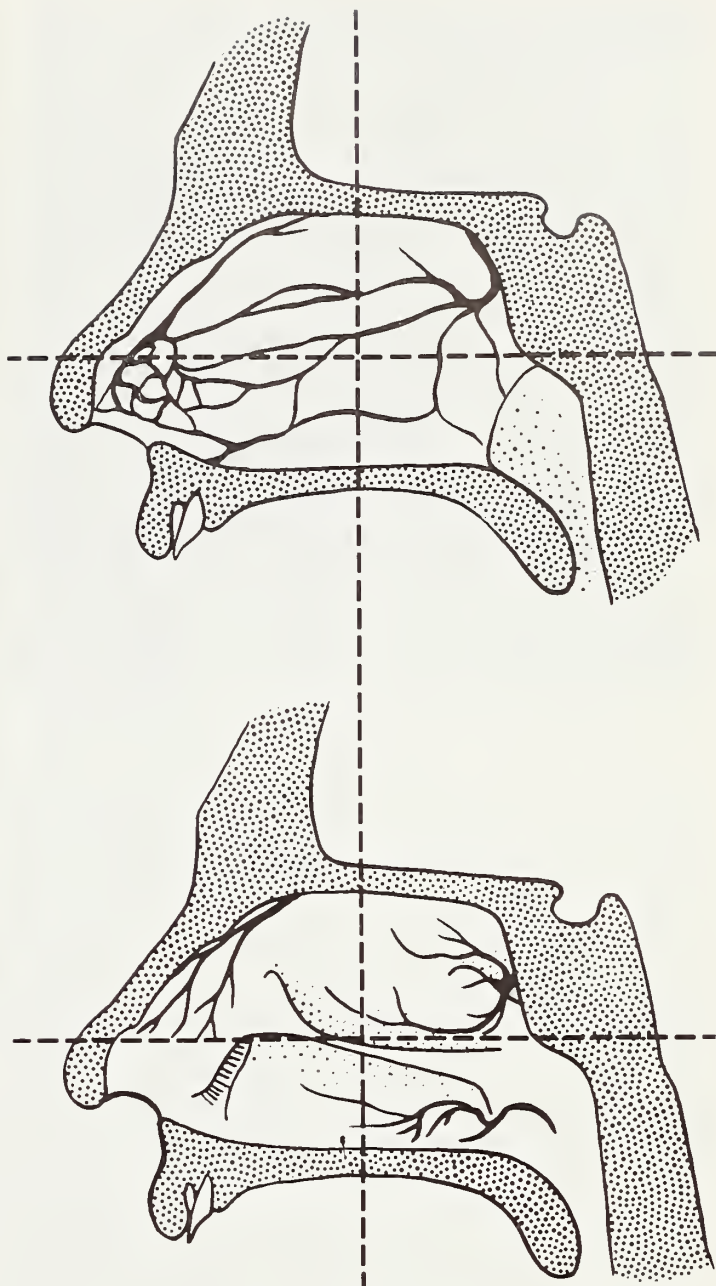


Figure 5. Site of principal bleeding points in nose. Septum above, lateral wall below.

The third step consists of controlling the bleeding point by use of cautery or packing. Topical anesthesia of adequate degree usually results from the cocaine-adrenalin pledget used during the inspection of the nose. Bleeding from small points on the anterior septum often stops with the application of these pledgets, but these points can be identified by a raised region on a superficial vessel. Bleeding is likely to recur if untreated. Cautery avoids the discomfort of packing the nose. Cautery with silver nitrate is inefficient for adults and its use is limited to children. Electrocoagulation by diathermy is preferred. Topical anesthesia is adequate for mucosal surfaces but should be supplemented by subcutaneous injection of an anesthetic agent when the bleeding point is near the skin-mucosal junction. The pointed



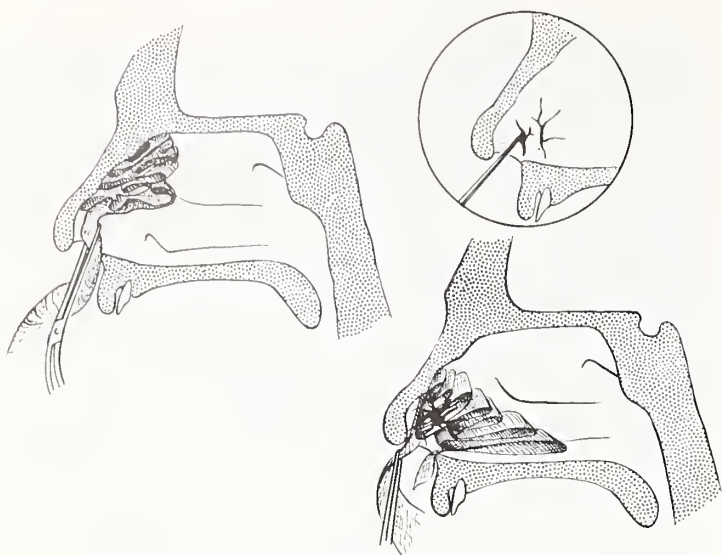


Figure 6. Application of cautery and pack for bleeding from anterior region of nose.

cautery tip is held slightly away from the surface, and a spark gap is created. This technique avoids adhesion to the vessel and creation of bleeding as the tip is withdrawn. Adjacent vessels must be sealed before the actual bleeding point can be closed. A spark jumped to the bleeding point often restarts bleeding, making control much more difficult. Lubrication by "Vaseline" applied to the anterior nares twice daily helps avoid recurrence of anterior bleeding (figure 6).

#### PACKING

Packing may be used for anterior bleeding and is the method of choice for the other quadrants.

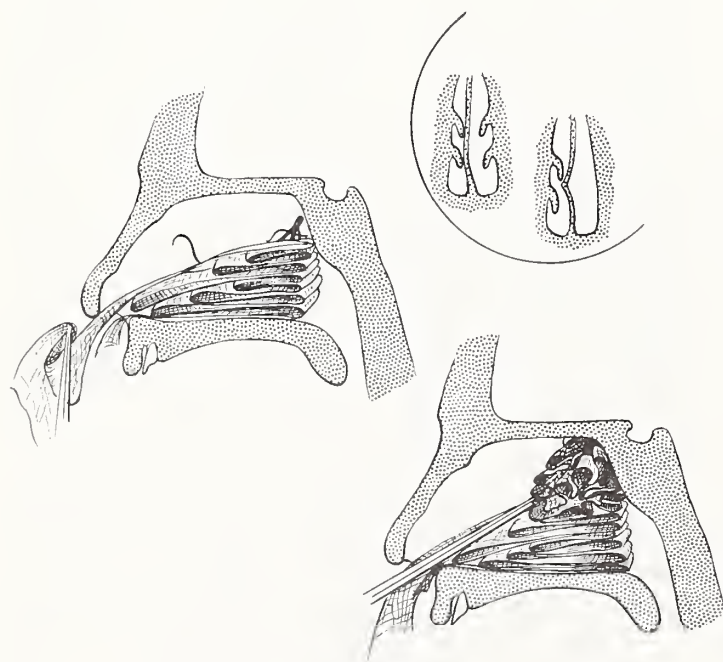


Figure 7. Packing the sphenopalatine region. Effect of septal deviation.

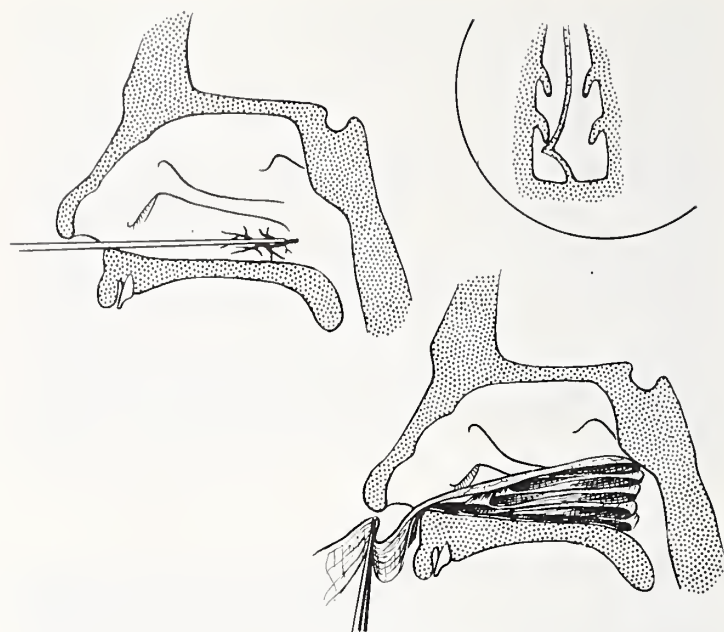


Figure 8. Cautery and packing for postero-inferior quadrant of nose.

General rules for packing the nose are:

1. Apply an absorbable material (oxidized cellulose) to the bleeding region. This material remains when the pressure pack is removed.
2. Lubricate gauze-packs liberally with antibiotic ointment to minimize trauma to mucosa and to suppress bacterial growth.
3. Place the packing in layers to help maintain position and pressure. The pack should extend to the floor (or roof) of the nose in order to maintain pressure.
4. Leave pack in place five days. A pack once placed should remain until the vessel heals; five days is a safe interval.
5. Antibiotic coverage is desirable while the nose is packed.

The anterior ethmoidal artery is located in a narrow niche at the angle between the roof and anterior wall of the nose.

Oxidized cellulose (Oxycel) is placed in the bleeding region and "Vaseline" gauze is forced against the Oxycel. When the pack reaches the level of the middle turbinate, a layering process is started. Each layer is pressed upward, while the pack is built down to the floor of the nose (figure 6).

Packing for the posterior region of the nose is done from the floor up. A fold that is the full length of the floor of the nose is pressed to the floor. The second fold is two-thirds the length of the first, and the third fold is one-third the length of the first. The full-length fourth layer provides an anchor, and the process is repeated. This method



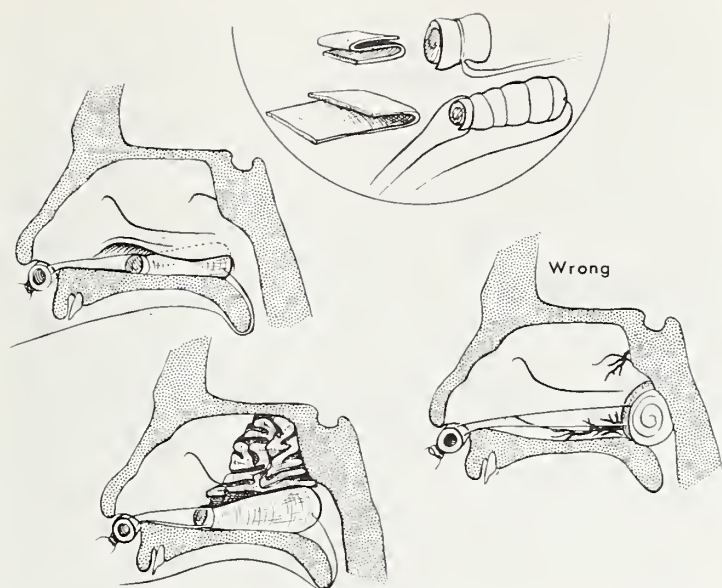


Figure 9. Correct and incorrect methods of applying postnasal pack for treatment of nosebleed.

builds the pack more rapidly at the back than at the front, maintaining working space at the anterior nares. When the pack reaches the level of the face of the sphenoid, gauze is forced against the face of the sphenoid between the pack and the roof of the nose until the nose is filled. This applies pressure to the sphenopalatine artery (figure 7).

When the bleeding occurs under the cover of the inferior turbinate, the initial layers of this pack must be pressed laterally, into the inferior meatus, in order to bring pressure on the bleeding area (figure 8).

A pack that is properly constructed in layers and built up from the floor of the nose does not slide through the choana into the nasopharynx and provides an adequate base for applying pressure to bleeding points at the posterior region of the nose.

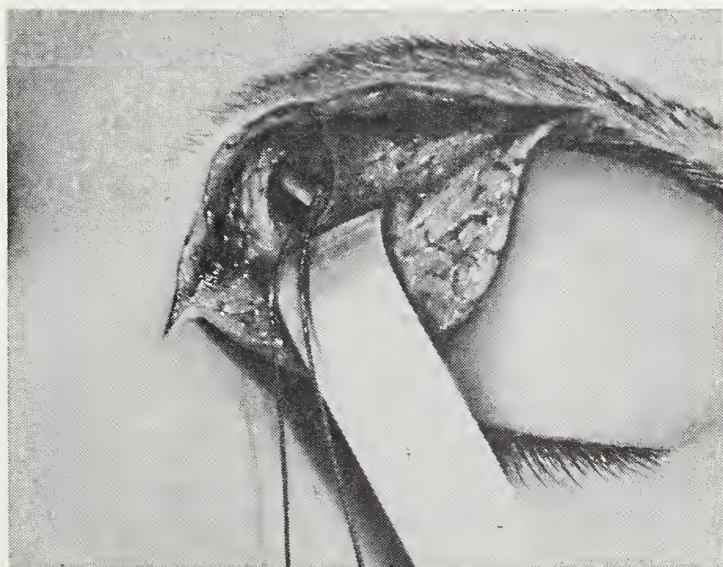


Figure 10. Ligation of anterior ethmoidal artery.

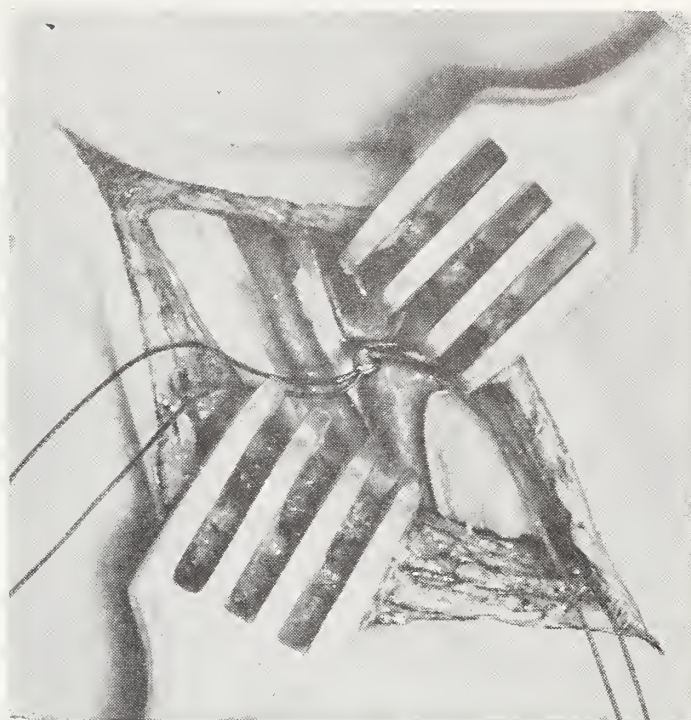


Figure 11. Ligation of external carotid artery.

Severe irregularities of the nasal septum that prevent effective packing make submucous resection of the septum a part of hemorrhage control. Both nasal chambers must then be packed simultaneously to achieve pressure on the bleeding point (figures 7 and 8).

In some patients, an overhang of the inferior turbinate prevents application of pressure to Woodruff's plexus. In these, it is necessary to fracture the inferior turbinate toward the septum and place the initial packing between the turbinate and the floor of the nose. The packing is then continued superior to the turbinate in order to apply adequate pressure. When the bleeding point in the inferior meatus is clearly seen, electrocoagulation may be used for its control (figure 8).

A postnasal pack is seldom indicated in the treatment of nosebleed. As usually applied, this is a cylindric roll of gauze placed in the nasopharynx. The roll does not apply pressure to any bleeding point in the nose but is effective for control of bleeding from the nasopharynx.

A properly constructed postnasal pack is conical in shape, approximately one and one-half cm in diameter at its larger end. Three heavy strings are attached, two at the small end and one at the large end. A catheter passed through the nose and brought out the mouth is used to draw the double strings back through the nose. The third string



## Nosebleed / SIMONTON

comes out through the mouth and is taped to the cheek as an aid to removal of the pack. This pack presses against bleeders in the inferior meatus and can provide a base for packing the sphenoid-ethmoid niche. The postnasal pack should be liberally impregnated with "Vaseline" before it is placed in order to reduce the possibility of restarting the bleeding when it is removed. Patients wearing postnasal packs should be watched for edema of the palate and for acute otitis media (figure 9).

### HOSPITAL CARE

Hospital care is desirable for the patient whose bleeding is not controlled by the initial packing or for the patient whose blood is depleted by severe, intermittent bleeding. The patient should be put at complete bed rest for five days, with the head elevated and given sedatives to allay apprehension and analgesics to relieve discomfort. Hematinic drugs are useful. Transfusion should be considered if hemoglobin values fall below 10 gm/100 ml blood.

When a patient presents a history of having bled through an existing pack, the pack should be removed and bed rest instituted. Further investigation and packing are futile in the absence of active bleeding. In many instances no further bleeding occurs. Healing is encouraged by putting the nose at rest. A simple method is to reduce the air stream by a tape across the external nares.

### SURGICAL CARE

Ligation of vessels leading to the nose is

required when bleeding is not controlled by packing. The anterior ethmoid artery is derived from the internal carotid artery and is readily approached in the orbit approximately two cm posterior to the inner canthus. The plane of dissection is between the periosteum and the bone at the roof and medial wall of the orbit (figure 10). The arterial supply to the posterior region of the nose arises from the external carotid through the internal maxillary branch. The easiest access is through the neck where the external carotid may be ligated distal to its superior thyroid branch (figure 11).

### DRUG USE

Many drugs have been used as aids in the treatment of nosebleed by improving the coagulation of blood. These usually have given disappointing results, with the exception of vitamin K in patients who are receiving an anticoagulant and vitamin C in patients with deficiency of this vitamin.

### SUMMARY

In controlling acute nosebleed, there must be an organized plan for the emergency treatment. This plan includes a list of necessary equipment and supplies, the use of analgesia and topical anesthesia to make the patient comfortable, assistance when cautery is used in the nose, a method of packing the nose that allows application of pressure to the bleeding point, a brief discussion of hospital care, and the surgical approach for patients whose bleeding is not controlled by simpler methods. □

Mayo Clinic, Rochester, Minnesota

## BEN H. NICHOLSON MEMORIAL LECTURESHIP

Robert A. Aldrich, M.D., Professor of Pediatrics and Director, Division of Human Ecology, University of Washington, Seattle, will give the first *Ben H. Nicholson Memorial Lecture* on Thursday, May 8th, 1969, 4:00 p.m. at the Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma. The lectureship has been established in memory of Ben H. Nicholson, M.D., long-time practicing pediatrician in Oklahoma City and faculty member since 1931, who died September 25th, 1968. All physicians are cordially invited to attend. Further details can be obtained from: The Postgraduate Office, University of Oklahoma Medical Center, Oklahoma City, Oklahoma 73104.



# The Emotional Impact of Surgical Sterilization of the Female

JAMES L. MATHIS, M.D.

*Surgical sterilization produces an emotional impact which can be predicted pre-operatively. Proper preparation and after care can alleviate or prevent morbidity in most cases.*

ADVANCES IN general medicine and in pre-natal and natal care have reduced the number of organic indications for surgical sterilization. Thus, there is at least a relative increase in elective sterilization for purely socio-economic reasons. Simultaneously there has been a marked reduction in the number of organic complications following gynecological surgery in general. One result of these advances in technical knowledge is that the psychological aspects of gynecological surgery have been brought more clearly to attention and have assumed relatively greater importance. It is reported that approximately four percent of women undergoing hysterectomy will become severely depressed within six months.<sup>6</sup> This figure is very significant as a complication of a routine surgical procedure. Lesser degrees of disability are difficult to define objectively but may be of equal importance to the patient and her family. They probably do not come to the attention of the surgeon very often.

Historical data is profuse in its testimony

Presented at the Annual Spring Symposium in Gynecology and Obstetrics, The Department of Gynecology and Obstetrics, University of Oklahoma School of Medicine, March, 1968.

on the emotional importance of the uterus and its reproductive significance. For unnumbered centuries the worth of the female entirely depended upon two divisions of her sexual function. She was of some temporary worth as an object for the entertainment and sexual gratification of men, but the vast majority of females were marketable only for the ability to reproduce. This latter factor was so significant that the medical profession of the ancient Egyptians discovered methods of determining a woman's potential fecundity. One simplified method was to place a piece of garlic in the vagina. The odor of garlic would be detectable on the breath of a potentially fertile woman within 12 hours. This test was based upon the theory that all body orifices were in communication with each other. In another test the woman squatted over a mixture of date flour and barley beer. The fumes from this mixture would produce nausea and vomiting in the woman who was able to bear children. There are no known control studies on these tests.

The Kahoun papyrus, written approximately 1,950 B.C., contains 17 prescriptions concerning female sterility. Some degree of control was needed, however, and the Ramesseum papyrus gives a contraceptive prescription primarily composed of crocodile dung.

The early Greeks did not doubt the emotional significance of the uterus, although they also erred somewhat in the physiology and anatomy of it. Wandering of the uterus into the upper part of the body was thought responsible for most female emotional disorders. This theory, or variations of it, remained intact for enough centuries for the



Greek word for uterus, hystera, to be used to designate almost all female emotional disorders, and later to become a more defined medical condition.

The evolution of medical knowledge led to some slight change in these early theories in the 17th Century, A.D. The condition known as "malady of the vapors" became a favorite complaint of the fashionable ladies of the time. It signified hysterical symptoms caused by the spreading to the upper part of the body and the brain of noxious substances supposedly emanating from the uterus. This one-to-one relationship between hysterical symptomatology and the uterus was so deeply ingrained for at least 3,000 years that leading medical authorities of Europe literally derided Charcot when he reported a case of hysteria in a man in the late 1800's. Only the work of Freud and Breuer continuing into the 20th Century laid to rest this archaic concept, and yet, as in most instances of mythological thinking, behind it lay a grain of truth.

This grain of truth is that the basic biological and psychological value system of the female is founded upon the ability to reproduce. Thousands of years of custom and attitude cannot be easily reversed. It well may be that the accelerating sociological changes that have started in the last few years will alter this, but it is not yet so. Whereas previous generations of women felt guilt and lowered self-esteem when they were unable to produce large numbers of children, the exact opposite may become true as society awakens to the horrors of over-population. The future woman with three or more children may become an object of covert social disapproval, but most of us will not live to see this. There remains much about the reproductive drive and its control which we do not understand.

A review of the literature concerning the emotional effects of sterilizing surgery shows little unanimity of opinion. Within the many bits of evidence and generalities there is one definite fact: each woman must be individually assessed before a prognosis can be made. This assessment must include: 1. The indications for, and the patient's attitude toward the proposed surgery; 2. The

previous personality characteristics with special attention to responses to losses; 3. the ongoing family situation.

1. *Indications for, and the patient's attitude toward the proposed surgery.*

Sterilizing surgery of any type demands a concrete indication which may range from socio-economic difficulties to an advanced malignancy, and some of the emotional impact will be determined by this indication. Janis and others have shown that anxiety provoked by any type of pelvic surgery is quantitatively greater than that produced by upper abdominal incisions.<sup>5</sup> Some manifest anxiety is a healthy sign, but too much or too little may indicate post-operative difficulties.<sup>7</sup> While the amount of emotional charge connected to the reproductive system is always great, it varies considerably from woman to woman. An assessment of each individual case must include the knowledge that the female may conceptualize her uterus as having four separate functions. They are (a) reproductive, (b) menstrual, (c) sexual, and (d) as a general reservoir of strength and effectiveness.<sup>3</sup> These factors may be summarized as separate segments of a woman's attitude toward femininity.

(a) *Reproductive function*: Drellich and Bieber have verified the findings of others that the major pre-operative concern of the woman facing sterilization involves a loss of child-bearing ability.<sup>3</sup> The consciously expressed attitude toward having children is not an iron-clad indicator of underlying feelings. Some women who desire no more children and who are aware of realistic disadvantages of conception may still need the ability to conceive in order to feel complete and feminine. This need may have many roots, some of which border on the pathological, but an assessment of this function always is indicated if the physician is to be forearmed.

The opposite of the woman whose self-esteem depends upon her reproductive functions is the one who has worked through and accepted a complete repudiation of femininity. To her, the uterus may represent a foreign body whose removal can result only in increased well-being. One such patient managed to get both breasts and her uterus removed by her mid-thirties. Her overall functioning and emotional balance improved



without these constant reminders of an undesired state.

(b) *Menstrual function*: Most women view menstruation as an essential part of the female physiology. To some it is a cleansing function as necessary as the excretion of other waste products of the body. To others it is a physiological calendar by which to schedule living. To almost all women, it is a concrete monthly symbol of femininity and womanhood. It is generally true that the woman who feels less secure about her feminine identification will most need this monthly symbol and that the need is unrelated to the presence or absence of pain and discomfort.

A young housewife and mother who was convalescing from a hysterectomy for carcinoma of the uterus expressed her attitude toward the function of menstruation succinctly. She had become angry with some nurses who had told her how lucky she was to be cured of cancer, and simultaneously they congratulated her on her escape from the monthly troubles of menstruation. I questioned her about her unexpected reaction to these well meant remarks. Her return was, "Doctor, how would you feel if you awoke in the morning with a perfectly smooth face and knew that you would never have to shave again?"

(c) *The sexual function*: Many women, roughly one-half of one series, fear the lessening of sexual desires and abilities after a hysterectomy.<sup>3</sup> Certainly of equal importance is the fantasy that their husbands will find them less desirable after this damaging surgery. In Melody's series of eleven women severely depressed following hysterectomy, seven of the husbands actually had rejected the wife, thereby fulfilling the pre-operative fantasies of being sexually undesirable!<sup>1</sup>

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A 1949 graduate of St. Louis University School of Medicine, James L. Mathis, M.D., limits his practice to his specialty, psychiatry. He is presently Associate Professor of Psychiatry at Rutgers University Medical School. He is a member of the American Psychiatric Association, the American Psychosomatic Society, the New Jersey Neuropsychiatric Association and the American College of Psychiatrists.

The actual sexual disturbances which occur are not uniform, but are related to irrational fears and beliefs concerning the loss of this valued organ, and are therefore, secondary to psychological rather than anatomical effects in most cases.

(d) *The uterus as a source of strength and general effectiveness*: The idea of "cleaning out" essential organs carries with it, in many women, the idea of weakening and of a general loss of strength and effectiveness. Women are seen post-operatively who act as if the uterus had been the reservoir of energy. These women have the pre-operative fear that they will no longer be able to carry out their domestic duties. It is possible that this is a combination of the mechanism of denial and displacement, and that the fears actually are concerned with whether or not they will be able to carry out their sexual activities and remain desirable to their mates. Part of it may come from deeply imbedded ideas about what happens to castrated animals. Castration and sterilization are synonymous in the minds of many patients. The surgeon must be aware of this possible occurrence and anticipate it with corrective discussions.

This part of the evaluation also means a consideration of the etiology of the primary condition. Disease or injury of the genitalia may be viewed as punishment for past errors, frequently of a sexual nature. There are probably few women who have not done, either in fantasy or in reality, something for which they could feel punishment was warranted. It behooves the surgeon to delve at least superficially into whatever fantasies the woman might have about the indications for surgery and to allow these fantasies free expression.

## 2. *Previous personality characteristics with special attention to response to losses.*

The pre-menopausal patient who is to lose her reproductive ability must be allowed to express her thoughts and fantasies about it. This is a necessary part of the operative preparation, but the physician also must ask some direct questions about the patient's past emotional history. Some attention must be paid to previous separations, deaths, diseases, operations, etc. Attention is to be focused not so much upon the incidents them-



selves as upon how the woman reacted to them. The physician must then evaluate the patient's responses in relationship to the reality value of the loss. The history of a period of depression following the death of a young child 15 years previously might be of less significance than a similar reaction following a more trivial loss. Of even more significance is a history of relatively severe loss within the past year or so. Nothing so well predicts depression as a history of a previous depression.

3. *The ongoing family situation.*

A sterilizing procedure rarely is an operation involving only the woman. The male partner enters the picture in two ways; the woman may have fantasies of how he will react to her after the operation, and the man may have fantasies and thoughts about how the woman will be affected. It is important to allow each to express these fantasies, and then, and only then, to correct misconceptions and fallacious attitudes. For example, a woman with eight living children and mild diabetes was scheduled for repair of a ventral hernia. Tubal ligation was to be done at the same time, but she approached surgery with a very depressed attitude. A joint interview with husband and wife disclosed a couple quite devoted to each other, but with some rather unrealistic ideas. They were firmly convinced that a woman was a relatively weak creature whose fidelity was dependent upon the danger of pregnancy. They knew that another pregnancy was contraindicated, they desired no more children, but they feared that the surgical sterilization would be the end of their marriage. This exemplifies the need for the husband to be an integral part of the pre-operative evaluation and preparation.

Included in this topic of assessment are the reality factors of parity and age. The loss of reproductive capacity may be a great blow to a 25-year-old mother of one child, but it may be a comparative blessing to a 38-year-old mother of six. Even so, the physician must not allow the reality factors to lull him into ignoring the significance of the surgery to the older patient or to the grand multiparous one. The fact that she already has a number of children may indicate that a

woman has a deep-seated need for pregnancy.

The incidence of surgical sterilization of the female remains high despite the advances of contraception in the past decade. This appears especially true when the indication for surgery is on an obvious socio-economic or psychological basis. The question then arises whether to do a hysterectomy or tubal ligation on the pre-menopausal female. Opinions and practices differ widely, and before discussing the evidence pro and con from an emotional aspect, it is worth repeating that each case demands individual evaluation and treatment.

If we return to the idea that most women perceive sterilization as a loss, we must add that hysterectomy produces the loss of an actual part of the body, while tubal ligation produces only the loss of a function.

There is evidence that an elective tubal ligation is less apt to produce a disturbing emotional reaction than a hysterectomy.<sup>2</sup> Barglow felt that fantasies of pregnancy or of the ability to become pregnant were important to the female for six to 12 months post-operatively.<sup>1</sup> These fantasies allowed the gradual working through of the loss syndrome without the production of severe depressive symptomatology or other clinical emotional upsets. The loss of the uterus and the menstrual function make it much more difficult for the woman to maintain these fantasies without becoming consciously aware of their absurdity. Tubal ligation patients not only could maintain the fantasy, but many consciously felt that the procedure could be reversed if they so desired. It appears that as long as motherhood is even theoretically possible, the woman feels intact as a female.

One other factor may contribute to the woman's emotional response to a sterilizing procedure. Ellison felt that many adverse reactions, especially those occurring with elective tubal ligation, were compounded by a sense of guilt which was not so severe when the woman felt that the surgery was unavoidable.<sup>4</sup> He felt that this reaction could be lessened if the surgeon did not simply present the facts and request that the woman make the decision, but rather, presented the facts and then firmly advised a course of action. Of course, it remains the woman's



decision in the final moment, but the average patient's reliance upon the authority figure's strongly put advice will negate this point.

The psychological assessment of the patient begins the moment of patient-physician contact. Even when organic pathology dictates the choice of the surgical procedure, a total assessment will be necessary for the proper preparation and after-care. For example, Mrs. A., a 24-year-old mother of one child, was scheduled for hysterectomy for carcinoma of the uterus. Her fantasies were that women who lost the uterus were doomed to a life of nervousness and relative disability. Two aunts had been "no good" after a similar operation. She also felt that her condition was related to gonorrhea which she had contracted from her husband during a previous teen-age marriage. She told of her severe reaction at the age of 13 to her mother's death from carcinoma of the uterus, and she vividly remembered her depression following a spontaneous abortion at age 20. Her family situation was that of a relative newcomer who had no close friends or kin in the community. Her husband was a hard-working but immature young man who could be depended upon for very little support.

This brief and incomplete vignette gives us enough information to predict a severe reaction to the surgery. Armed with this knowledge, a close relationship was established with the patient as quickly as possible, and the therapeutic relationship continued before, during and after the surgery. The depressive reaction did occur, but not enough to complicate the convalescence or retard her normal activities. Had the same woman been 38 or 40 years of age, the mother of several children, without a history of past losses followed by depressions, and with good family support, surgery could have been done with little thought of an adverse reaction.

A choice of procedures must be made when the surgery is for purely contraceptive meas-

ures. The surgeon must evaluate the patient in a similar manner and largely base his decision upon reality factors which include age and parity, plus how greatly he feels that the patient needs the function of menstruation and the possible pregnancy fantasies. An inflexible policy appears no more logical than deciding that all deliveries will be performed in exactly the same manner.

#### SUMMARY

Surgical sterilization represents a loss to most women. Removal of the uterus appears to be a greater loss than a tubal ligation, but in either case, the severity of the reaction depends upon the previous personality of the patient, the meaning to her of the uterine functions, and probably of equal importance, the relationship between the patient and her environment. The most important parts of the environment are the husband and the physician. The physician's first step is to evaluate the total significance of the proposed surgery in relation to the individual patient's personality. He then is in a position to help the patient work through the emotional aspects of it. It also appears important for the physician to be firm in his recommendations for a specific sterilizing procedure if he proposes to do it at all. □

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# Use and Interpretation of Renal Function Tests

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*The "When and How" of renal function test utilization is hazy in the mind of many physicians. The purpose of this article is to provide guidelines for the use of these tests.*

**M**YRIAD TESTS, both of a specific nature and of a general nature, have been devised to evaluate renal function. Many of these are useful only on a research basis and bear no clinical application in the ordinary practice of medicine.

The purpose of this paper is to consider some of the routine clinical examinations as performed in any clinical practice and to discuss their meaning, interpretation and method of performance. These clinical tests are listed in table 1.

As is the case with many organs of the body, the kidney has a great deal of "reserve." That is to say, the kidneys are able to preserve the proper "milieu interior" of the body until approximately 75 percent of the nephrons are destroyed or rendered non-functional. Apparently healthy individuals may have a considerable degree of renal

function impairment and yet feel perfectly well. However, when the glomerular filtration rate is depressed to about 25 percent of normal, a slight further decrease in filtration is likely to lead to impressive clinical abnormalities.

As shown in figure 1, blood urea nitrogen (BUN) levels are within the normal range until glomerular filtration rate (GFR) has been reduced to approximately 25 percent of normal. Figure 1 also demonstrates that further impairment of GFR results in the elevation, in sequence, of plasma levels of creatinine, phosphate, and urate (uric acid). Plasma levels of all four substances increase exponentially as renal failure progresses and very high plasma levels are present when GFR has been reduced to five percent of normal. Thus, blood levels of substances normally excreted by the kidneys are useful as an indicator of poor renal function only when renal damage is far advanced.

Renal function studies are of little assistance in diagnosing the etiology of renal disease. One must rely upon a well taken his-

Table I  
RENAL FUNCTION TESTS

FUNCTION	CLINICAL TESTS
Glomerular filtration	Creatinine Clearance Plasma Creatinine Plasma Urea (BUN) PSP Excretion
Renal Plasma Flow	Intravenous pyelogram Radio-renogram Renal Scan
Tubular Transport Excretion (via pelvis and ureters)	Concentration Tests Intravenous pyelogram Radio-renogram

From the Department of Medicine, University of Oklahoma Medical Center and the Oklahoma City Veterans Administration Hospital.



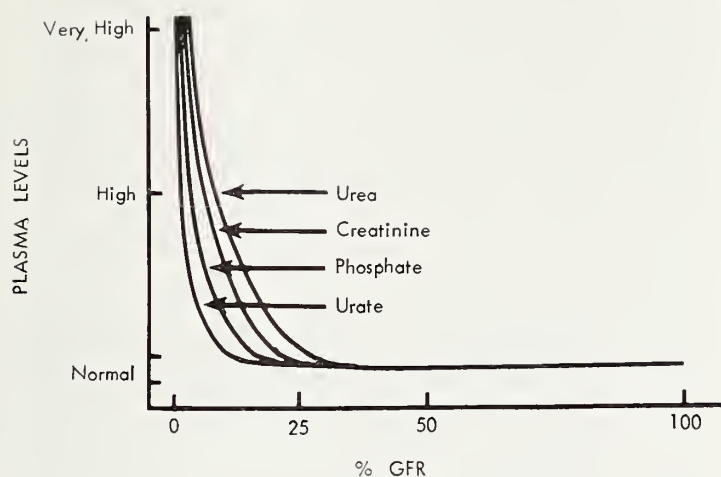


Figure 1

#### Plasma Levels of Urea, Creatinine, Phosphate and Urate Compared to GFR

As glomerular filtration rate (GFR) diminishes, urea (BUN), creatinine, phosphate and urate levels become sequentially elevated in the plasma. A slight further decrease in GFR then produces marked rises in these parameters.

tory, the examination of the urine, radiologic studies and renal biopsy. However, there are occasions when function studies aid in the diagnosis. For example, evidence of tubular dysfunction out of proportion to glomerular impairment should lead one to favor a diagnosis of pyelonephritis over glomerulonephritis.

The status of renal function should be determined in every patient suspected of having renal disease. Such determinations are useful to the clinician both from the standpoint of evaluation of therapy and the determination of prognosis, at least to some degree. Perhaps the most important aspect of renal function studies is the careful, accurate and complete collection of urine samples. Proper collection of urine samples is one of the most difficult problems in clinical medicine, inpatient or outpatient. The physician must carefully instruct both the nursing personnel and the patient as to precisely how the urine is to be collected. Almost all of the tests discussed below are absolutely dependent on accurate urine collection if they are to be of any value. Commonly performed clinical tests are listed in table I.

#### TESTS OF GLOMERULAR FUNCTION

##### *Blood Urea Nitrogen Concentration:*

Determination of blood urea nitrogen (BUN) is the most commonly used test in

screening patients for renal disease. As indicated above, blood urea nitrogen becomes elevated only when there is marked impairment of glomerular filtration rate. Hence, this test cannot be used to measure more moderate degrees of impairment.

This test also suffers from a degree of nonspecificity since the blood level of urea is regulated by the rate of production of the substance as well as by the rate of its urinary excretion. Therefore, the blood urea level will be influenced by the dietary protein intake and by metabolism of body cells, releasing endogenous nitrogen. For example, hemorrhage into the gastrointestinal tract with reabsorption of nitrogen from lysed erythrocytes increases urea production by the liver and the blood concentration of urea. This situation could mislead the physician in his evaluation of renal function impairment.

The upper limit of normal for blood urea nitrogen by most techniques of measurement is 20 mg.%.

##### *Serum Creatinine Concentration:*

No more difficult to measure technically, serum creatinine is a more reliable guide than BUN in the determination of severe degrees of renal impairment. It is not appreciably affected by either dietary intake or hemorrhage into the gastrointestinal tract. On the other hand, since creatinine is manufactured by and stored in skeletal muscle, diseases affecting muscle tissues may alter blood levels of this substance.

Ordinarily, serum creatinine concentration is about 0.7 - 1.0 mg.%; therefore, the BUN to creatinine ratio is ten to 14 to one. This ratio remains rather constant with intrinsic renal disease. However, when obstructive uropathy is present, this ratio may increase considerably. This may be explained by the fact that there is little reabsorption of creatinine by the renal tubules but considerable reabsorption of urea. Therefore, obstruction in the urinary tract will enhance urea absorption and favor its increase in the blood over an increase in creatinine.

##### *Urea Clearance:*

The clearance of a substance may be defined as that volume of blood from which a substance is removed by the kidney in a given unit of time. The clearance of a sub-



stance which is neither reabsorbed nor secreted by the renal tubules should therefore reflect only the rate of filtration through the glomeruli. Substances which are known to be excreted in the urine by filtration alone and are not appreciably reabsorbed by the tubule, such as inulin, are not normally found in the body fluids. However, endogenous urea and creatinine clearances can be used as measures of glomerular filtration rate.

Since tubular reabsorption of urea may be quite variable, usually amounting to 30 to 70 percent, its clearance is much less reliable than that of creatinine. Urea clearance tests should be discarded in favor of creatinine clearance tests and will not be discussed further.

#### *Creatinine Clearance:*

Creatinine is the substance normally found in blood plasma which most closely approximates the ideal substance mentioned above for the determination of glomerular filtration. However, a small amount of creatinine is secreted by the tubules. Furthermore, the apparent serum creatinine concentration is slightly higher than the true measurement, due to inclusion of non-creatinine chromagen in the Jaffe method of determination. Due to a balance of the two errors, the creatinine clearance agrees closely with the true GFR in most instances.<sup>1</sup> Creatinine clearances may be considerably in error in some patients with the nephrotic syndrome; the exact reason for this is unknown.

Inulin clearance is a more accurate measure of GFR but requires an exogenous load, allowance for a period of equilibrium of the substance throughout the body fluids, and constant intravenous infusion of inulin during the test period. Inulin is also more difficult to measure than creatinine. Creatinine clearance is sufficiently accurate for clinical studies.

Creatinine clearance is performed in the following manner: The patient is given a water load of approximately 15 ml/kg body weight. Approximately 15 minutes later the patient empties his bladder and the urine is discarded. The urine is then collected over a two or four hour test period, at the end of which time the patient again voids and this urine is saved. At about the mid-

point of the urine collection period, a blood sample is drawn; creatinine is measured in the blood plasma and in an aliquot of the collected urine. The clearance formula shown below is then applied.

$$C = \frac{UV}{P}$$

C = clearance of the substance (here creatinine) in ml/minute

U = urine concentration of creatinine in mgm%

V = volume in ml/minute

P = plasma concentration of creatinine in mgm%

Normal values for creatinine clearance range between 90-110 ml/minute.

The two most important elements in the test are the water loading to promote a good urinary flow and accurately timed and complete urine collections. Accuracy in the test diminishes as volume decreases. Urine flow rates above five milliliter/minute are desirable; flow rates below two milliliter/minute are not acceptable. Incomplete bladder emptying may be a cause of considerable error, particularly in older men. For this reason, it is even advisable to study the patient during two periods of one or two hours each. If outlet occlusion is known to be present, a clearance study may be valid only if bladder catheterization is utilized.

A two or four hour study is generally more reliable than a 24 hour creatinine clearance because urine is more likely to be discarded by error over a long period of study. If the urine collection is complete, the 24 hour creatinine clearance test is reliable and reproducible.

#### TESTS OF RENAL PLASMA FLOW

##### *Phenolsulfonphthalein (PSP) Test*

PSP is a dye which is excreted in the urine primarily as a result of secretion by the proximal renal tubules. Only a very small amount of this substance is filtered since about 80 percent is bound to plasma protein; six percent of the total dye is excreted by filtration and 94 percent by tubular activity.<sup>2</sup> The majority of PSP is excreted from the blood in one circulation through the kidney; therefore, the test serves as a rough guide for renal plasma flow. Thus



the urinary excretion of PSP serves both as an indication of proximal tubular secretory function and as a measure of renal blood flow. The technique of this test is as follows: The patient is given a water load of approximately 15 ml/kg of body weight. Approximately 15 minutes later the patient empties his bladder completely and the urine is discarded. Exactly one milliliter of PSP solution, containing six mgm of the dye, is then injected intravenously. Fifteen minutes later the bladder is emptied and the urine is saved. The concentration of PSP in an aliquot of each urine sample is determined by a colorimetric technique and the percentage of dye excreted calculated.

The first 15 minute time period is of the greatest value. Normally, at least 25 percent of the injected dye should be excreted during this interval. An additional 15 percent of the dye should be excreted during the second 15 minute period.

Previously a two hour excretion period was utilized in the test. It is now realized that such a long period decreases the value of the test, for even extensively damaged kidneys may eventually secrete an appreciable amount of dye after a prolonged period of time. In the absence of obstructive disease and of extreme oliguria, a reduction in the excretion of the dye indicates renal damage and a decrease in renal blood flow.

#### TESTS OF TUBULAR FUNCTION

##### *Tests of Urinary Concentration:*

Final concentration of the urine is now known to occur in the collecting ducts as they pass through the hyperosmotic medullary portion of the kidney. It is beyond the scope of this paper to detail the means by which this is accomplished with the establishment and maintenance of an osmotic gradient. In general it may be said that the establishment of the medullary osmotic gradient by the countercurrent multiplier system requires active transport of sodium and urea by the intact tubules of the loop of Henle. Functional integrity of the vasa recta is necessary to maintain this medullary osmotic gradient.

In renal disorders impairment of the ability to produce a concentrated urine is com-

mon and frequently appears relatively early. In measuring the concentration of urine, clinicians usually use hydrometers and record specific gravity. Measurements of the osmolality of urine are most meaningful and may be derived from determinations of freezing point depression. The osmolality of urine, as referred to that of plasma, reflects the ability of the renal tubules to perform osmotic work, particularly during water deprivation or exposure to high concentrations of antidiuretic hormone.

When the ability to concentrate and dilute urine is persistently lost, as seen in advanced renal disease, the concentration of the urine may be fixed at about 280-300 mOsm/kg or a specific gravity of about 1.010.

The concentrating ability of the kidney may be tested by measuring the specific gravity or the osmolality of an early morning urine. If the specific gravity is 1.020 or greater (or the osmolality 800 mOsm/kg or greater) in the absence of glucosuria and proteinuria, the kidneys are able to adequately concentrate urine. If the early morning urine is not concentrated, the ability of the kidney to form a concentrated urine may be tested by dehydration, which increases the endogenous release of anti-

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diuretic hormone, or by the administration of exogenous vasopressin.

1. Dehydration Test:

Fluid deprivation is a good test of neurohypophyseal integrity if the period of fluid deprivation is carefully supervised and severe dehydration avoided. Fluid deprivation is begun in the early morning; each urine volume is measured; and the patient is weighed at frequent intervals. Fluid deprivation is continued until three to five percent of the body weight has been lost, or for 24 hours. At the end of this time the patient voids and the specific gravity (or preferably osmolality) of the specimen is measured. Normally the specific gravity should reach 1.022 or higher (or the osmolality 800 mOsm/kg or greater).<sup>4</sup>

This test should not be performed when drugs or medications which affect urine concentration are being given to the patient (e.g., mannitol, thiazides, dyes used for intravenous pyelography).

2. Vasopressin Administration:

The ability of the kidney to concentrate the urine may be assessed by measuring the urine concentration after a dose of vasopressin. The patient is given an intramuscular injection of five units of vasopressin tannate in oil. Any urine specimen collected over the next 24 hours should have a specific gravity of 1.022 or greater or an osmolality of 800 mOsm/kg or greater.

This test should be performed only in younger patients and those without a history of vascular disease, as vasopressin may induce arterial constriction. The test is contraindicated in pregnancy, severe hypertension, atherosclerotic vascular disease, epilepsy, oliguria and coronary artery disease.

3. Dilution Test:

Tests of the ability to produce dilute urine are less popular now than they were in former years since persistent impairment of dilution appears relatively late in the course of renal disease. The patient is given 20 ml of water per kilogram of body weight within a period of ten to 20 minutes. Urine is collected every hour thereafter for five hours. Normally, the volume will exceed 75 percent of the amount of water ingested while the specific gravity will fall to 1.004

or less (or osmolality to 100 mOsm/kg or less). The patient must be kept in a calm, quiet environment and not be permitted to smoke.

SPECIAL TESTS OF TUBULAR FUNCTION

When it is suspected that a patient has a primary renal tubular disorder (usually a congenital lesion, but occasionally acquired as a result of pyelonephritis or drug toxicity) special tests may be necessary to demonstrate the defects of tubular function. These specific tests are technically difficult and are rarely performed in the clinical laboratory.

Such tests include measurements of acid excretion, free water clearance and the maximal tubular resorptive capacity (T<sub>m</sub>) of glucose, phosphate, para-aminohippurate (PAH) and amino acids.

RADIOLOGIC EXAMINATION

It is not within the province of this paper to cite in detail the various radiologic techniques for renal studies. It should be pointed out that the intravenous pyelogram does, in fact, give some measure of renal function as well as demonstrate the anatomy of the excretory channels.

The iodized substances utilized to opacify the excretory system are both filtered by the glomeruli and secreted by the tubules. The concentration of the substance achieved and the rapidity of its appearance thus indicates functional ability.

RADIOISOTOPE TESTS

During the past several years, isotopic studies have been utilized as renal function tests. These studies are the radio-renalogram, renal scan and iothalamate clearance.

*Radio-Renalogram:*

This study is performed by injecting intravenously a minute amount of contrast medium (Hippuran) tagged with iodine-131 or iodine-125.<sup>3</sup> The procedure depends on the nearly exclusive renal accumulation and excretion of the radioactive test agent by the kidneys. Radiation detectors are placed over the region of each kidney and connected to a recorder. The tracing of radioactivity re-



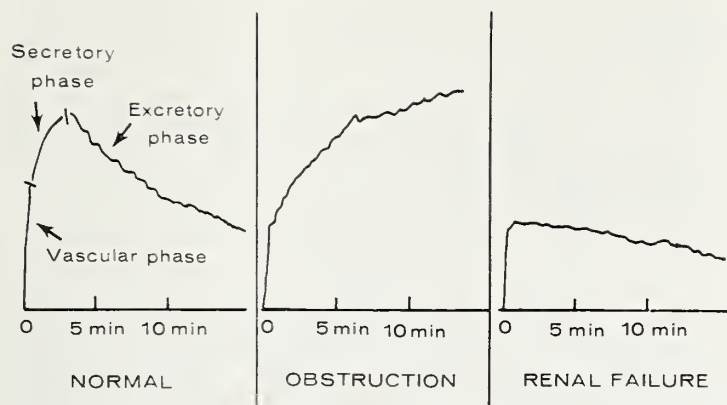


Figure 2  
Radio-Renogram

Sample radio-renograms depict one normal and two pathological studies. The normal study demonstrates the sharp upsweep of the vascular phase, the slower rise of the secretory phase and the exponential fall of the secretory phase.

The radio-renogram of a kidney with urinary obstruction indicates a diminished vascular phase, and no excretory phase. In renal failure, there is a diminished vascular phase and no secretory phase.

corded has certain characteristics which are proportional to various aspects of renal function as shown in figure 2.

The tracing obtained is composed of three major components. The initial spike, recorded in a matter of 20 seconds, is pri-

marily concerned with the blood supply to the kidney. Its height is proportionate to the vascular capacity of the kidney.

The second segment of the radio-renogram rises more slowly, peaking at about four to six minutes. This segment is primarily a reflection of tubular secretory function, which is partially dependent on adequate blood flow to the kidney.

The third, or excretory, phase is a rapid exponential fall in the tracing. The angle of decline is primarily a function of the ability of the kidney to excrete the radioactive urine which has collected in the renal tubules and pelvis.

The tracing of the kidney with urinary obstruction (figure 2) demonstrates a diminished vascular phase, a prolonged secretory phase and no excretory phase. This kidney is able to secrete the radioactive agent into the tubular fluid, but the radioactivity is retained in the kidney.

In renal failure (figure 2) the radio-renogram shows a diminished vascular phase and no secretory phase. Since the diseased kidney is unable to secrete the radioactive substance into the tubular fluid, the radio-



Figure 3  
Renal Scan

A normal left kidney and an abnormal right kidney are shown in this renal scan, indicating a lack of uptake of the radioactive substance by a portion of the right kidney. Right nephrectomy revealed a tumor mass involving the medial aspect of the kidney.



## Renal Tests / MATTER, et al.

active material is removed by the circulation.  
*Renal Scan:*

In this procedure, the intravenous infusion of a mercurial diuretic tagged with Mercury-203 or -179 of Hippuran-I131 is made.<sup>1</sup> The material remains in the kidney parenchyma for a long period of time, allowing careful and deliberate mapping of the kidneys with a scanning device (figure 3).

Both tests have been utilized primarily in the diagnosis of renovascular hypertension, but the renal scan may also indicate a tumor, cyst, infarction or atrophy of the kidney.

### *Radioisotope Clearances:*

Radioisotope techniques utilizing I<sup>125</sup> iothalamate, Cr<sup>51</sup> edetic acid or radioactive cobalt Vitamin B<sub>12</sub> for quantitating GFR have been developed. These methods are less expensive and technically easier to perform than are other clearance tests for GFR. However, the tests require an exogenous load, allowance for a period of equilibration of the substance throughout the body fluids and constant intravenous infusion of the radioisotope during the test period. The concentration of the radioisotope in blood and urine samples is determined by placing samples in a gamma counter.

### SUMMARY

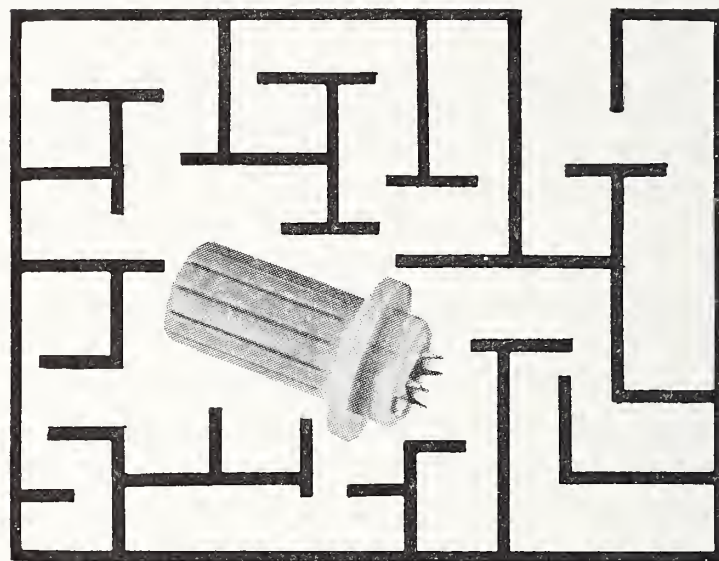
Renal function studies are usually of little assistance in diagnosing the etiology of renal disease; the history, urinalysis, pyelogram and renal biopsy are much more useful in diagnosis. On the other hand, tests of renal function are of immense value in determining present renal status, evaluating therapy,

and estimating prognosis. Serial tests performed over a period of time indicate the course of the disease in any patient and are, therefore, more valuable than a single determination. □

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# Abstracts

## THE ROLE OF SURFACTANT IN THE PULMONARY RESPONSE TO TRAUMA

In this study the authors studied the effects of non-thoracic trauma on surfactant, a surface-active alveolar lining material necessary for the sustained patency of alveoli. In the absence of this material, increased surface tension forces collapse the alveoli and produce atelectasis and loss of respiratory function. Surfactant has been identified as a lipoprotein complex, dipalmitoyl lecithin attached to an alpha-globulin. It has been shown to appear in the human fetus at six months.

Injury to the alveolar lining can be produced by CO<sub>2</sub> poisoning, pulmonary embolization, hemorrhagic shock, and hydrochloric acid aspiration. What occurs is a metabolic imbalance between rapid depletion of surfactant and failure of replenishment by alveolar cells with depletion of surfactant and progression to atelectasis.

After direct trauma, the early response is primarily vascular with edema formation and air-trapping. Other sources of surfactant depletion after trauma include pulmonary edema and the administration of aerosols.

The Role of Surfactant in the Pulmonary Response to Trauma. Lazar J. Greenfield, M.D., V. Michael Barkett, M.D., and Jacqueline J. Coalson, Ph.D. *J. of Trauma*, 8(5): 735-741, 1968.

**Reviewer's Note:** An interesting study which adds to the rapidly growing accumulation of knowledge about pulmonary function.—C. Bloedow, M.D.

## ANATOMY AS APPLIED TO CLINICAL MEDICINE

For many years, Doctor Lachman has contributed articles on Anatomy as Applied to Clinical Medicine to "The New Physician." I can remember reading them as a medical student and continue to enjoy them when I get a chance to peruse them. This particular selection concerning vaginismus combines a description of the female anatomy responsible for this unfortunate circumstance with some highly interesting comments on Sir William Osler. A fascinating case history taken from "Medical News" of 1884 is quoted, giving in exquisite detail an episode of vaginismus. It was written by Egerton Y. Davis which is a pseudonym used by Doctor Osler. The account turns out to be apocryphal but leads to a very delightful discussion of the problem of vaginismus and some interesting notes on Doctor Osler. The combination of anatomical, clinical, and literary knowledge is typical of Doctor Lachman and I commend this article and others by him to those of you who have access to "The New Physician."—J. Bahr, M.D.

Anatomy as Applied to Clinical Medicine. Ernest Lachman, M.D. *The New Physician*, 16: 301-303, 1967.

## DISAPPEARANCE OF THE Q-DEFLECTION FOLLOWING MYOCARDIAL INFARCTION

The authors reviewed serial ECG's of 775 patients with myocardial infarction and with Q-wave abnormalities to evaluate the evolution of the Q-deflections during a ten-year period of observation. Of special interest was the number in whom disappearance of ab-

normal Q-deflections occurred as a natural phenomenon unrelated to the development of left bundle branch block or subsequent infarction.

Of the 775 cases reviewed 6.7 percent showed complete disappearance of pathological Q waves. The majority had disappeared by the end of two years. The shortest time of disappearance was one month; the longest, six years. There was no significant difference in disappearance of Q waves for various locations of infarcts. The mean SGOT value during the acute phase of infarction was less for the group of patients showing regression of Q waves. Only 9.6 percent of this group developed peri-infarction block (overall incidence for the entire group of patients with myocardial infarct was 37 percent).

The precise mechanism in disappearance of the Q waves is not known. Presumably the infarcted area is small, contracts and is covered eventually by viable muscle.

The disappearance of the Q wave does not imply a better prognosis. Other factors leading to regression of Q-deflection were development of intraventricular block (12 percent) and subsequent myocardial infarction (eight percent).

Disappearance of the Q-Deflection Following Myocardial Infarction. J. M. Kalbfleisch, M.D., K. S. Shadaksharappa, M.D., L. L. Conrad, M.D., and N. K. Sarkar, M.D. *Amer. Heart J.*, 76: 193-198, 1968.

## RECENT PUBLICATIONS

The *Journal* welcomes the opportunity to list current publications by any Oklahoma physician.

Concept Identification of Schizophrenics as a Function of Social Interaction, Sex, and Task Complexity. A. Wolfgang, V. Pishkin, and E. S. Rosenbluh. *J. of Abnormal Psychology*, 73(4): 336-342, 1968.

Antimicrobial Therapy in Medical Gastrointestinal Diseases. H. D. Riley, Jr., M.D. *Pediatric Clinics of North America*, 15(1): 227-242, 1968.

Echinococcus Cysts in the Savannah Baboon. W. M. Crosby, M. H. Ivey, W. L. Shaffer, and D. D. Holmes. *Laboratory Animal Care*, 18(3): 395-397, 1968.

Post-Traumatic Aortic Arch Aneurysm with Arteriovenous Fistula to the Innominate Vein. E. Tarlov and L. J. Greenfield. *J. of Thor. and Cardio. Surg.*, 55(1): 134-140, 1968.

Hemodynamic Characteristics and Blood Gas Exchange in the Normal Baboon. C. A. Guenter, D. R. McCaffree, L. J. Davis, and V. S. Smith. *J. of App. Physiology*, 25: 507-510, 1968.

Cytologic Alterations in Hereditary Metabolic Disorders. L. R. Miller, G. B. Gordon, and K. G. Bensch. *Lab. Invest.*, 19: 428-436, 1968.

Comparative Effects of Endotoxin on Canine and Primate Intestine. L. B. Hinshaw. *J. of Surg. Res.*, 8: 535-538, 1968.

An Evaluation of Various Environmental Factors Affecting the Propagation of *Cryptococcus Neoformans*. C. M. Ishaq, G. S. Bulmer, and F. G. Felton. *Mycopathologia and Mycologia Applicata*, 35: 81-90, 1968.

Immune Responses to Experimental Vaccinia Infection. J. E. Rice and R. M. Hyde, *J. Inf. Dis.*, 118: 386-392, 1968. □



# Books As Clinical Tools

## REFERENCES ON PEDIATRIC UROLOGY

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Diseases of the genitourinary tract in children represent a significant segment of problems seen in pediatric practice. For many years information regarding these disease processes was found only in standard texts such as Nelson's *Pediatrics*,<sup>1</sup> Campbell's *Urology*,<sup>2</sup> and Gross's *The Surgery of Infancy and Childhood*.<sup>3</sup> Several works published in recent years have expanded knowledge in this area, however, and will facilitate accurate diagnosis and improved therapy for physicians dealing with these problems.

Excellent basic information is provided in *The Encyclopedia of Urology, Vol. XV, Urology in Childhood*.<sup>4</sup> Concise, well illustrated sections are devoted to congenital anomalies, obstruction, infection, stone, tumor, enuresis, neurogenic bladder, hypertension, endocrine disorders, and abnormal sexual states.

Several references direct attention exclusively to congenital anomalies. *Hypospadias*, by J. C. H. M. Van Der Meulen,<sup>5</sup> is an excellent short text devoted entirely to the embryology, pathologic anatomy, symptomatology, and therapy of this deformity. *Congenital Malformations of the Rectum, Anus and Genito-Urinary Tracts*, by F. Douglas Stephens,<sup>6</sup> presents well written and well illustrated sections on malformations of the rectum and anus, dysplasias of the urinary tract, congenital anomalies of the inguinoscrotal region, and microdissection studies in renal morphology. *The Encyclopedia of Urology, Vol. VII/1, Malformations*,<sup>7</sup> presents sections on anomalies of the kidney, ureter, bladder, bladder neck, urethra, male and female genitalia, as well as intersex states, hypospadias, and vesicoureteral reflux.

One of a series sponsored by the Department of Continuing Education, University of Oklahoma Medical Center.

From the Departments of Urology and Pediatrics, the Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma.

Intersex states and endocrine disorders relating to the genitourinary system are reviewed in detail in Williams's *Textbook of Endocrinology*.<sup>8</sup> Another short text of superior quality which reviews genetic and endocrine factors is *Abnormal Sexual Development*, by Federman.<sup>9</sup>

Radiologic aspects of genitourinary diseases in children are amply illustrated in *Clinical Urography*, by Emmett,<sup>10</sup> and *Radiographic Atlas of the Genitourinary System*, by Ney and Friedenbergl.<sup>11</sup>

Surgical approaches to problems of the genitourinary system in children are presented in many of the above references, and also are reviewed in *Atlas of Pediatric Surgery*, by White,<sup>12</sup> and *Operative Urological Surgery*, by Swinney and Hammersley.<sup>13</sup>

A final source of reference material is to be found in periodical literature. Recent thought about these disease processes can be quickly reviewed in *The Year Book of Urology*.<sup>14</sup>

Use of the above cited references will provide current information regarding diagnosis and therapy of disease processes of the genitourinary tract in children for all interested physicians. □

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## Tumor Board Proceedings

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### CASE No. 8: Leiomyosarcoma of the Pharynx

**PRESENTATION:** The patient is a 22-year-old white male who presented approximately four weeks ago with a one-week history of sore throat and fever. Examination revealed a large right parapharyngeal mass

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

which was felt to represent a parapharyngeal abscess. This mass was incised and central necrosis and debris was encountered. The patient improved for a week on antibiotics and the mass became smaller. At the end of two weeks, it was apparent that this mass probably was a neoplasm. The mass was biopsied one week ago and revealed a leiomyosarcoma. This tumor extends from the right tonsillar fossa into the soft palate and inferiorly into the hypopharynx. It seems to have its upper limit somewhere at the junction of the hard and soft palate and involves most of the soft palate on the right as well as the right pharynx. It extends to the level of the pyriform recess anteriorly or perhaps a little lower. It extends anteriorly to involve the angle of the mandible with definite fixation to the mandibular periosteum, and it appears to have invaded the tongue and extends into the floor of the mouth on the right. Further evaluation of the patient, including chest x-ray and bone survey, revealed no evidence of metastases. There is no other palpable mass in his neck. Our problem for consideration today is the management of this patient.

**DOCTOR CONDIT:** Doctor Snow is in the operating room and is unable to be here. Doctor Snow, Doctor Markland and I have discussed this young man's case quite extensively, but before we get into that, I would like to know what your thoughts are about the operability of this lesion, Doctor Williams.

**DOCTOR WILLIAMS:** I think the lesion is operable, but I would want to know if



Doctor Bogardus would have any hope at all of successfully irradiating this patient.

DOCTOR CONDIT: How large an operation would you have to perform?

DOCTOR WILLIAMS: A partial maxillectomy and hemi-mandibulectomy. I do not think that the floor of the mouth is directly invaded, but I could not palpate far enough back in his mouth to determine the posterior extent without gagging him.

DOCTOR CONDIT: I think that I can summarize Doctor Snow's feelings. He agrees that this may be technically operable, but he feels that the chance of control by this procedure is small. He would prefer to see what can be done before operating, possibly with chemotherapy or radiation therapy or both. Doctor Bogardus has not seen the patient previously, but I would like him to comment about the role of radiation therapy in managing these tumors.

DOCTOR BOGARDUS: With the exception of lymphosarcomas, soft tissue sarcomas are generally thought to be notoriously radio-resistant. There is a recent series by the M.D. Anderson Hospital in Houston, covering a period of 15 to 20 years, on patients with soft tissue sarcomas who had received either radiation therapy alone or in combination with surgery. The observation was that, in general, patients who received a combination of intensive pre-operative radiation followed by surgery did much better than the patients who received surgery alone. I am implying that these tumors are not quite as radio-resistant as we have thought in the past.

DOCTOR WILLIAMS: Well, I think that we have all given up the idea that an attempt of radiation therapy makes surgery either more hazardous or adds to complications. If Doctor Bogardus is willing to try it, I would go along with him.

DOCTOR CONDIT: But this would not reduce the size of the operation afterwards.

DOCTOR WILLIAMS: Oh, absolutely not.

DOCTOR CONDIT: The other point is that I asked Doctor Chanes to check on our experiences with chemotherapy for sarcomas. What are your thoughts at the moment, Doctor Chanes?

DOCTOR CHANES: Well, we have not

had much experience at all with this type of tumor. I discussed this with Doctor Lane in pediatrics, who pointed out that leiomyosarcomas in children have been treated with a combination of Actinomycin D and Vincristine in a one-week course, followed by a conventional course of radiation therapy, and after the radiation therapy, another course of Actinomycin D and Vincristine, followed by surgery. This regimen has given promising results. One specific case he mentioned was a child in Children's Hospital who was treated this way. When the lesion was surgically removed, the pathologist could find no evidence of tumor.

DOCTOR CONDIT: We have been working with sarcomas for a number of years and some of them are extremely sensitive to drugs. Sometimes they respond to Methotrexate, sometimes to a combination of Actinomycin D and Vincristine and sometimes to Cytoxan. It seems that a combination of Actinomycin D and Vincristine is very effective and certainly in some sarcomas, does produce regression right away. So, if we can begin with this combination and then add radiation therapy, we have a good chance of shrinking this tumor prior to surgery.

DOCTOR CHANES: Actinomycin D has been shown to sensitize the skin to x-ray. We have not had any problems, but the radiation therapy that we have been using has been split-dose and has not been the conventional long term course.

DOCTOR WILLIAMS: Except that you have a rather low skin dosage, don't you?

DOCTOR BOGARDUS: Yes.

DOCTOR CONDIT: We have actually had very little trouble with this problem, as Doctor Chanes said, but this certainly can happen. But it subsides. If one were to get the most favorable situation following chemotherapy and a split-course of radiation therapy, the tumor could get a lot smaller. How soon after completing radiation therapy would you think he should be operated?

DOCTOR WILLIAMS: I don't think it makes much difference in terms of technical aspects of the operation.

DOCTOR CONDIT: About bleeding and so forth?



DOCTOR WILLIAMS: Yes, bleeding and wound healing. I would go along with the radiation therapist and would take any interval he advises.

DOCTOR CONDIT: Doctor Markland, what do you think about the interval?

DOCTOR MARKLAND: Well, with squamous cell carcinoma it is customary to wait four to six weeks, but I don't really know why this is customary. With sarcomas of this sort, I don't see any reason to go to a very long interval.

DOCTOR CONDIT: I think the reason for the four to six week interval originally was that tumors continue to shrink after completion of radiation therapy and it was mistakenly thought that you could get away with a smaller operation. Since this is not

true, I really don't think it makes any difference.

DOCTOR BOGARDUS: I would favor using our usual intensive pre-operative treatment plan of 3,000 rads in ten treatments, followed immediately by surgery. This has worked very well in the past for other tumors. Following surgery we could start treatment again and finish up with a tumor area total dose of 6,000 rads. The combination of drugs, radiation therapy and surgery would give the best possible chance of a cure in this case.

*DIAGNOSIS:* Leiomyosarcoma of the pharynx.

*TUMOR BOARD RECOMMENDATIONS:* Chemotherapy with Actinomycin D and Vincristine, followed by radiation therapy and surgical excision. ☐

## APRIL MEDICAL TV SERIES

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Daniel Deykin, M.D., Associate in Medicine

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#### **April 29 PRINCIPLES OF LONG-TERM STEROID THERAPY (30 minutes)**

James Melby, M.D., Associate Professor of Medicine, Boston University School of Medicine

Frances C. Lowell, M.D., Associate Professor of Medicine, Harvard Medical School

John G. Harter, M.D., Associate Clinical Professor of Medicine, Harvard Medical School

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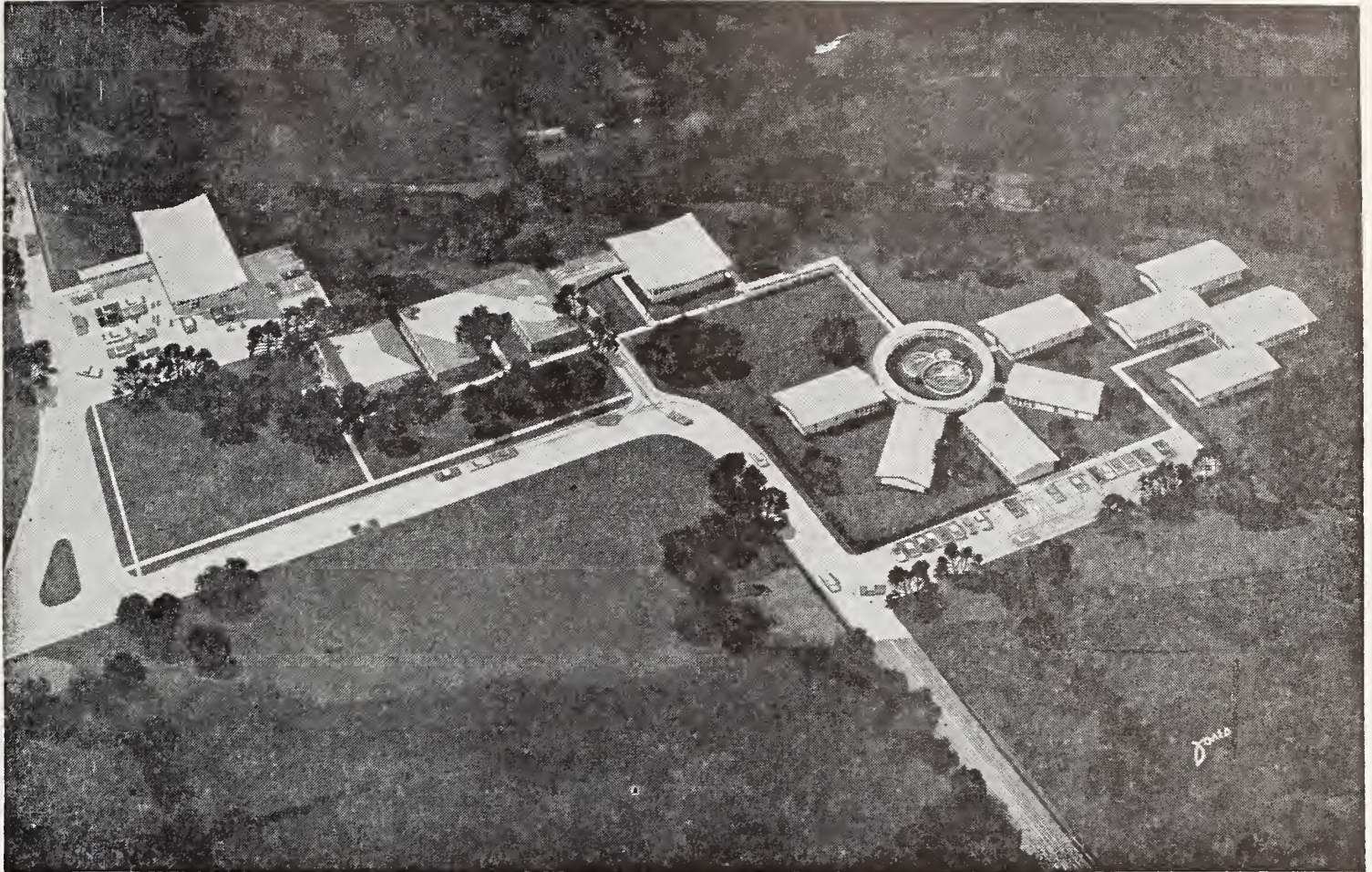
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Joseph L. Knapp, M.D.  
Jackson H. Speegle, M.D.  
Fred H. Jordan, M.D.  
Joseph H. Lindsay, M.D.  
John T. Holbrook, M.D.

### PSYCHOLOGY

Traudl E. Jordan-Diener, Ph.D.  
R. A. Mitchell, M.S.  
A. N. Griffin, M.A.

**1353 N. Westmoreland ★ Dallas 11, Texas ★ FE 1-8331**



# Seminar Set on Legal-Medical Aspects of Organ Transplants

Organ transplants will be the subject for a one-day seminar at the University of Oklahoma Center for Continuing Education. The all-day conference will be held on Friday, May 9th, at the Kellogg Center on the Norman campus.

Both the medical and the legal aspects of transplants will be discussed. In addition to summaries of current medical progress in this area, the following topics will be included in the program:

- The Uniform Anatomical Gift Act
- Definition of Death
- Discussion of Autopsy Statutes
- Priorities of Consent
- Criminal Responsibility
- Moral Aspects of Organ Transplants

The seminar will take the form of a complete case study. It will be presented with the legal, social, and medical aspects discussed from the time the patient sees the family physician, referral to the specialist, through the transplant procedure and follow-up care. A panel format will be used for the presentation and group participation and discussion is encouraged.

Keynote speaker for the conference will be Mr. Gordon A. Christenson, Assistant to the President, University of Oklahoma. Participating in the panel presentations will be:

Bruce A. Beard, M.D., Chief of Psychiatry, Veterans Administration Hospital

Lazar Greenfield, M.D., Chief of Surgery, Veterans Administration Hospital

Donald B. Halverstadt, M.D., Assistant Professor of Urology, University of Oklahoma Medical Center

James W. Hampton, M.D., Associate Professor of Medicine, University of Oklahoma Medical Center

William J. Matter, M.D., Assistant Professor of Medicine, University of Oklahoma Medical Center

Casper H. Smith, M.D., Medical Center Hospital, Duncan, Oklahoma

Mr. George F. Short, Attorney, Oklahoma City, Oklahoma

Mr. Jack M. Sheehan, Attorney, Oklahoma City, Oklahoma

Doctor J. Clayton Feaver will be the luncheon speaker, and George F. Short, attorney, will conduct the dinner session.

The seminar is being conducted by the Department of Health Studies of the Continuing Education Center and is an outgrowth of the attention that has been focused on organ transplants in the past year. The department has made application for the conference to count as prescribed credit hours with the American Academy of General Practice and for approval of the American College of Surgeons.

Persons interested in attending the conference should write the following address:

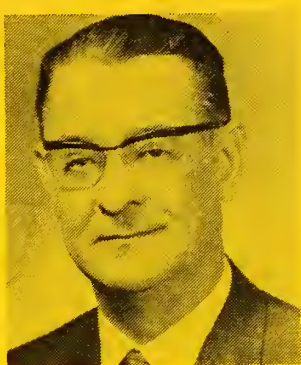
**The Department of Health Studies  
University of Oklahoma Center  
for Continuing Education  
1700 Asp Avenue  
Norman, Oklahoma 73069**



# Oklahoma State Medical Association



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Alternate (1971) . . C. S. Cunningham, M.D. Poteau

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William M. Benzing, Jr., M.D., Tulsa  
Richard B. Price, M.D., Oklahoma City



# Digest of Events

## HOTEL ACCOMMODATIONS

Headquarters for the 63rd Annual Meeting will be the Mayo Hotel, Tulsa, where a large block of rooms has been reserved for members of the Oklahoma State Medical Association. Physicians are requested to make their own reservations directly by writing to the Mayo Hotel, 115 W. 5th, Tulsa — providing the hotel with dates and times of arrival and departure.

All annual meeting business, scientific and exhibit activities are scheduled for the third and fourth floors of the nearby Tulsa Assembly Center. Social activities will be at the Mayo.

## REGISTRATION

Registration will open Thursday noon, May 15th, on the third floor of the Assembly Center, at the entrance to the exhibit area. The General Registration Desk will also be open from 8:30 a.m. until 5:00 p.m. on Friday and Saturday.

Members of the House of Delegates (including the Board of Trustees and Officers) may register at the General Registration Desk beginning at noon on Thursday. They will receive special badges upon presentation of their credentials cards. Registration for Delegates will continue on Friday morning at 8:30 a.m., immediately preceding the opening session of the House. Portfolios containing all business items to be considered will be distributed at the time of registration.

## BOARD OF TRUSTEES

The OSMA Board of Trustees will conduct its annual business meeting Thursday afternoon, May 15th. The meeting will convene in the Tulsa Assembly Center at 1:30 p.m. and should adjourn by 5:00 p.m.

## HOUSE OF DELEGATES

The OSMA House of Delegates will conduct two sessions during the 1969 annual meeting.

The opening session will be held on the morning of Friday, May 16th, and the closing

session on Saturday morning, May 17th. Both sessions will convene at 9:00 a.m. in the Tulsa Assembly Center and business should be concluded by noon each day in order to permit Delegates to attend afternoon scientific section meetings.

The opening session will feature the appearances of special guests, introduction of reports and resolutions, nominations of OSMA general officers, AMA Delegates and Alternates and candidates for the Board of Trustees.

All items of business introduced during the opening session will be sent to Reference Committees meeting that afternoon at 4:00 p.m. in the Assembly Center. Open hearings on the reports and resolutions will be conducted by four committees, and all members of the Oklahoma State Medical Association are invited to attend and to participate in the discussion.

The Reference Committees will prepare reports containing recommendations for presentation to the House of Delegates at the closing session on Saturday morning.

In addition, elections will be held during the closing session.

At the conclusion of the Friday and Saturday morning sessions, all Delegates are invited to attend the "Free Picnic Luncheons" to be held on the stage located in the exhibit area.

The Oklahoma State Medical Assistants Society will provide coffee for the House of Delegates each morning.

## SCIENTIFIC SESSIONS

The scientific portion of the annual meeting program will be held in the Assembly Center Thursday afternoon, May 15th, and all day Friday and Saturday, May 16th and 17th.

Thirteen special-interest medical societies are co-sponsoring section meetings in their respective fields. All section meetings, however, are open to the entire association membership.

The general theme of the scientific program is "EMPHASIS/TRAUMA," and most section meetings will be geared to this theme.



A detailed scientific program appears on pages 172 to 175 of this *Journal*.

On Thursday afternoon, May 15th, there will be section meetings on Pediatrics, Orthopedic Surgery, and Pathology (physicians' medical technologists may attend in limited numbers). Friday morning's program will feature section meetings in the fields of Internal Medicine, Obstetrics-Gynecology, and Urology. A Special Seminar on Trauma will be the sole program on Friday afternoon, designed for all medical practitioners. Saturday morning's program will include sections on Radiology, Surgery, Ophthalmology and Psychiatry. The scientific program will conclude on Saturday afternoon with sections on Anesthesiology, Dermatology and General Practice.

### **SPECIAL SEMINAR ON TRAUMA**

The highlight of scientific programming will be the Friday afternoon general session — "Special Seminar on Trauma." Speakers include: Edward L. Compere, M.D., Northwestern University School of Medicine; Alan P. Thal, M.D., University of Kansas School of Medicine; William E. Meacham, M.D., Vanderbilt University School of Medicine; and John A. Pierce, M.D., Washington University School of Medicine. Topics are: Management of the Brain-Injured Patient in the Presence of Multi-System Injuries; Shock from Hidden Hemorrhage; Thoracic Trauma; The Respiratory Intensive Care Unit — Explanation of Problems; and a Panel Discussion.

### **PICNIC LUNCHEONS**

The proverbial free lunch will become a reality on Friday and Saturday when Blue Shield and the Aetna Life and Casualty Company will alternate sponsoring picnic-type spreads for physicians and exhibitors.

Corned beef and pastrami sandwiches, beer, soft drinks and assorted relishes and side dishes will be served in an informal atmosphere on the stage of the Assembly Center.

Your name badge will be your admission ticket.

### **FREE "OYSTER CRACK"**

Oysters on the half-shell — plus baked

specialties such as Oysters Rockefeller, Casino and Bienville — will be the fare at the OSMA Oyster Crack set for Thursday evening in the Mayo Hotel's Crystal Ballroom at 6:30 p.m. Beer and soft drinks will be served. You and your wife will enjoy this interlude prior to dining in one of Tulsa's fine restaurants. Sponsored by the C. L. Frates and Wilson and Wilson insurance agencies, OSMA insurance counselors.

### **GALA GASLIGHT PARTY**

Friday night's Gala Gaslight Party will be a nostalgic return to the Roaring Twenties!

Entertainment will feature the popular Buddy Billen Band (Dixieland, old-favorites, and dance tunes), vocalist Smoky Durham, a talented chorus line from Tulsa's Pink Barn Dance Studio, Go-Go Girls, and a psychedelic light show.

A sandwich buffet supper will be served mid-evening, and there will be plenty of goobers, pretzels and draught beer throughout the party, plus setups for those who bring stronger liquids.

### **PRESIDENT'S INAUGURAL DINNER-DANCE**

On Saturday night, May 17th, the annual President's Inaugural Dinner-Dance will be held in the Crystal Ballroom of the Mayo Hotel at 7:30 p.m. It will be preceded by a social hour at 6:30 p.m. in the hotel's Pompeian Court.

Hillard E. Denyer, M.D., Bartlesville, will succeed Scott Hendren, M.D., Oklahoma City, as President of the Oklahoma State Medical Association. The inaugural ceremony will be conducted at the conclusion of the banquet.

Following the inauguration, physicians and their wives will be entertained by the delightful Browning Family, vocalists and instrumentalists. Six sisters and their two younger brothers join mother and father in one of the most entertaining musical variety shows to be found anywhere. And there's still more — dancing to the Joe Linde Orchestra!

The banquet menu will feature delicious T-bone steaks and Pinot Noir red wine. During the dance, setups may be obtained from the hotel. B.Y.O.L.

Social hour, gourmet dinner with wine, outstanding entertainment, dancing — all



yours for a below-cost price of only \$10.00 per person. Order your tickets in advance from the OSMA, P.O. Box 18696, Oklahoma City 73118.

#### **GOLF AND TENNIS TOURNAMENTS**

Tulsa's Oaks Country Club, Southwest of Tulsa, will be the site of the OSMA Annual Golf Tournament, scheduled to be held all-day Friday, May 16th. No specific tee off times are necessary. Greens fee is \$5.00, and electric carts may be rented. Physicians belonging to other country clubs may sign for their charges. Trophies will be awarded to winners of various classes, and will be announced at the Inaugural Dinner on Saturday evening. Matthew B. Moore, M.D., Tulsa, is chairman of the tournament.

The Annual Tennis Tournament will be played at Tracy Park Tennis Courts, East 11th Place and South Norfolk Avenue, on Friday, May 16th, beginning at noon. Refreshments will be served and trophies will be awarded in the singles and doubles classes. Advance registrations are requested to facilitate the tournament draw. They should be sent to Hugh Perry, Jr., M.D., 622 Warren Professional Building, 6465 South Yale, Tulsa (let him know if you have selected a partner). There is no entry fee, but bring your own balls.

#### **HOBBY AND FLOWER SHOW**

Display the products of your pastime activities at the Hobby and Doctors' Flower Show, sponsored by the OSMA Woman's Auxiliary.

Located at the entrance to the exhibit area, the show will feature the paintings, crafts,

and collections of OSMA members and their wives. The flower show entries will be restricted to green-thumb physicians.

Insurance against theft or damage to exhibits will be provided by the OSMA (and police protection will be furnished). Applicants should contact Mrs. George Adams, 4392 South Victor, Tulsa, providing her with information as to the nature of the display and the amount of space required.

#### **WOMAN'S AUXILIARY**

The Woman's Auxiliary to the OSMA will meet on May 15th-17th in the Mayo Hotel. A full program of events is scheduled on pages 181 to 185 of this *Journal*.

#### **PRESIDENTS' BREAKFAST**

The traditional breakfast for former presidents of the OSMA will be held at 7:30 a.m., May 17th, in the French Room of the Mayo Hotel.

#### **EXHIBITS**

Primary financial support for the annual meeting will be provided by approximately 70 technical exhibitors (see roster on page 177). This exhibit area, third floor of the Assembly Center, will be open from 12-5 on May 15th, and from 9-5 on May 16th and May 17th.

In addition, 14 scientific and institutional exhibits are planned, including a booth — sponsored by the OSMA Committee on Immunization and the State Health Department — where immunizations will be provided for registrants.

### **ANNUAL MEETING**

## **TELEPHONE MESSAGE CENTER**

#### **ATTENTION:**

While you are attending the OSMA Annual Meeting, your emergency calls may be referred to

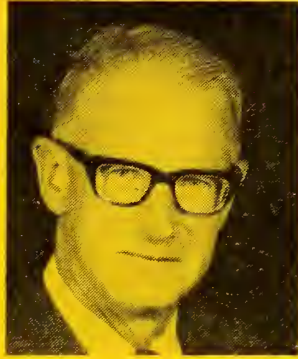
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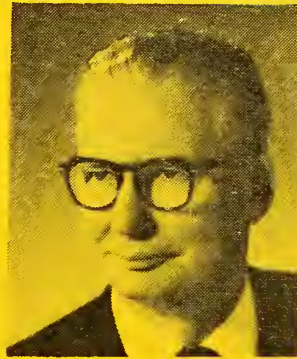
# Guest Speakers



Charlotte Baer, M.D.  
San Francisco, California



Crowell Beard, M.D.  
San Jose, California



Edward L. Compere, M.D.  
Chicago, Illinois



Clair E. Cox, M.D.  
Winston-Salem, North  
Carolina



L. W. Diggs, M.D.  
Memphis, Tennessee



James A. Friedman, M.D.  
Houston, Texas



A. H. Giesecke, Jr., M.D.  
Dallas, Texas



Robert W. Goltz, M.D.  
Denver, Colorado



William S. Howland, M.D.  
New York City



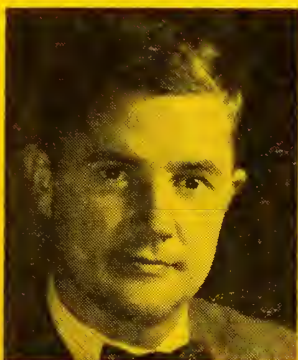
James J. McCort, M.D.  
San Jose, California



William F. Meacham, M.D.  
Nashville, Tennessee



Richard Phillipson, M.D.  
London, England



Thomas K. Oliver, Jr., M.D.  
Seattle, Washington



John A. Pierce, M.D.  
St. Louis, Missouri



Alan P. Thal, M.D.  
Kansas City, Kansas



# SCIENTIFIC PROGRAM

All meetings to be held on the Third and Fourth Floors, Tulsa Assembly Center

## Thursday Afternoon, May 15th, 1969

### SECTION ON PEDIATRICS

**Jake Jones, Jr., M.D., Shawnee, Presiding**

1:30 p.m. SEMINAR: RECENT ADVANCES IN THE CARE OF THE NEWBORN

*Participants:*

Thomas K. Oliver, Jr., Professor of Pediatrics, University of Washington School of Medicine, *Seattle, Washington*

Nelson K. Ordway, M.D., Professor of Pediatrics and Preventive Medicine and Public Health, University of Oklahoma Medical Center, *Oklahoma City*

J. Rodman Seely, M.D., Associate Professor of Pediatrics and Biochemistry, University of Oklahoma Medical Center, *Oklahoma City*

Thomas Rubio, M.D., Assistant Professor of Pediatrics, University of Oklahoma Medical Center, *Oklahoma City*

LeRoy C. Mims, M.D., Instructor in Pediatrics, University of Oklahoma Medical Center, *Oklahoma City*

### SECTION ON ORTHOPEDICS

**Jack L. Richardson, M.D., Tulsa, Presiding**

1:30 p.m. THE ROLE OF PROGRESS IN ORTHOPEDIC TREATMENT OF TRAUMA  
Earl D. McBride, M.D., Professor Emeritus of Orthopedic Surgery, University of Oklahoma Medical Center, *Oklahoma City*

2:00 p.m. THE IMPORTANCE OF PHYSIOLOGICAL COMPRESSION IN THE TREATMENT OF FRACTURES

Edward L. Compere, M.D., Chairman of the Department of Orthopedic Surgery, Northwestern University School of Medicine, *Chicago, Illinois*

2:45 p.m. Intermission to Visit Exhibits

3:00 p.m. SURGICAL MANAGEMENT OF ACUTE LIGAMENT INJURIES OF THE KNEE

Don H. O'Donoghue, M.D., Professor and Chairman of the Department of Orthopedic Surgery, University of Oklahoma Medical Center, *Oklahoma City*

Gael R. Frank, M.D., Associate Professor of Orthopedic Surgery, University of Oklahoma Medical Center, *Oklahoma City*

3:30 p.m. THE DIAGNOSIS AND SURGICAL TREATMENT OF INTRACRANIAL HEMATOMATA

William F. Meacham, M.D., Clinical Professor of Neurological Surgery, Vanderbilt University School of Medicine, *Nashville, Tennessee*

4:15 p.m. FRESH TRAUMA TO THE NECK AND THE TREATMENT FOR IT

Bob J. Rutledge, M.D., Associate Clinical Professor of Surgery, University of Oklahoma Medical Center, *Oklahoma City*

### SECTION ON PATHOLOGY

**T. W. Violett, M.D., Oklahoma City, Presiding**

1:30 p.m. MORPHOLOGY OF HUMAN BLOOD CELLS

L. W. Diggs, M.D., Professor of Medicine and Hematology, University of Tennessee School of Medicine, *Memphis, Tennessee*

2:50 p.m. Intermission to Visit Exhibits

3:10 p.m. PRACTICAL POINTS IN DIAGNOSIS OF HEMORRHAGIC DISEASES AND VALUE OF THE OBSERVATION OF THE CLOT

Doctor Diggs

4:30 p.m. QUESTIONS AND ANSWERS

## Friday Morning, May 16th, 1969

### SECTION ON INTERNAL MEDICINE

**C. W. Robinson, Jr., M.D., Oklahoma City, Presiding**

8:30 a.m. BILLING PROCEDURES AND CODING

Charlotte C. Baer, M.D., Associate Clinical Professor of Medicine, University of California School of Medicine, *San Francisco, California*



- 9:30 a.m. Intermission to Visit Exhibits
- 10:00 a.m. RECENT DEVELOPMENTS IN PATHOGENESIS OF EMPHYSEMA  
John A. Pierce, M.D., Associate Professor of Medicine, Washington University School of Medicine, *St. Louis, Missouri*
- 10:50 a.m. PANEL: ASSISTED RESPIRATION  
*Participants:*  
James F. Hammarsten, M.D., Moderator, Professor and Head of the Department of Medicine, University of Oklahoma Medical Center, *Oklahoma City*  
Clarence A. Guenter, M.D., Associate Professor of Medicine and Physiology, University of Oklahoma Medical Center, *Oklahoma City*  
C. Dowell Patterson, M.D., Clinical Instructor of Medicine, University of Oklahoma Medical Center, *Oklahoma City*  
Lazar J. Greenfield, M.D., Associate Professor of Surgery, University of Oklahoma Medical Center, *Oklahoma City*

#### SECTION ON OBSTETRICS AND GYNECOLOGY

**Sterling T. Crawford, M.D., Oklahoma City, Presiding**

- 9:00 a.m. ACCIDENT DATA IN TRAFFIC RESEARCH  
Lt. Elmo J. Lyman, Director of Special Projects, Department of Public Safety, State of Oklahoma, *Oklahoma City*
- 9:30 a.m. NON-OBSTETRICAL TRAUMA TO THE FEMALE GENITALIA  
James A. Friedman, M.D., Assistant Clinical Professor of Obstetrics and Gynecology, Baylor University School of Medicine, *Houston, Texas*
- 10:00 a.m. Intermission to Visit Exhibits
- 10:30 a.m. PATTERNS OF INJURY IN PREGNANT VICTIMS OF AUTOMOBILE ACCIDENTS  
Warren M. Crosby, M.D., Associate Professor of Gynecology and Obstetrics, University of Oklahoma Medical Center, *Oklahoma City*
- 11:00 a.m. QUESTIONS AND ANSWERS

#### SECTION ON UROLOGY

I

**Emanuel N. Lubin, M.D., Tulsa, Presiding**

- 9:00 a.m. URINARY TRACT INFECTIONS  
Clair E. Cox, M.D., Associate Professor of Urology, Bowman Gray Medical School, Wake Forest University, *Winston-Salem, North Carolina*
- 9:45 a.m. ANTIBACTERIAL THERAPY  
Doctor Cox
- 10:30 a.m. QUESTIONS AND ANSWERS
- 11:00 a.m. Intermission to Visit Exhibits

II

**Berget H. Blocksom, M.D., Tulsa, Presiding**

- 11:20 a.m. TRAUMA TO THE URINARY TRACT CAUSED BY ABRUPT DECELERATION: A PANEL DISCUSSION  
*Participants:*  
James R. Geyer, M.D., Assistant Professor of Urology, University of Oklahoma Medical Center, *Oklahoma City*  
William L. Parry, M.D., Professor and Head of the Department of Urology, University of Oklahoma Medical Center, *Oklahoma City*  
Clyde Snow, Ph.D., Research Assistant Professor of Urology and Assistant Professor of Preventive Medicine and Public Health, University of Oklahoma Medical Center, *Oklahoma City*

## Friday Afternoon, May 16th, 1969

#### SEMINAR ON TRAUMA

**Albert L. Shirkey, M.D., Tulsa, Presiding**

- 1:30 p.m. ADDRESS OF WELCOME  
Scott Hendren, M.D., President, Oklahoma State Medical Association and Associate Clinical Professor of Medicine, University of Oklahoma Medical Center, *Oklahoma City*



#### INTRODUCTION OF GUEST SPEAKERS

Lucien M. Pascucci, M.D., General Chairman, 1969 OSMA Annual Meeting  
and Visiting Lecturer in Radiology, University of Oklahoma Medical Center,  
*Tulsa*

1:45 p.m. **MANAGEMENT OF THE BRAIN-INJURED PATIENT IN THE PRESENCE  
OF MULTI-SYSTEM INJURIES**

William F. Meacham, M.D., Clinical Professor of Neurological Surgery,  
Vanderbilt University School of Medicine, *Nashville, Tennessee*

2:15 p.m. **SHOCK FROM HIDDEN HEMORRHAGE**

Edward L. Compere, M.D., Chairman of the Department of Orthopaedics,  
Northwestern University School of Medicine, *Chicago, Illinois*

2:45 p.m. **Intermission to Visit Exhibits**

3:15 p.m. **THORACIC TRAUMA**

Alan P. Thal, M.D., Professor of Surgery, University of Kansas School  
of Medicine, *Kansas City, Kansas*

3:45 p.m. **THE RESPIRATORY INTENSIVE CARE UNIT—EXPLANATION OF PROBLEMS**

John A. Pierce, M.D., Associate Professor of Medicine, Washington University School of Medicine, *St. Louis, Missouri*

4:15 p.m. **PANEL DISCUSSION**

All participants

## Saturday Morning, May 17th, 1969

#### SECTION ON OPHTHALMOLOGY

**Thomas L. Ozment, M.D., Tulsa, Presiding**

9:00 a.m. **TRAUMATIC PTOSIS AND LID LACERATIONS**

Crowell Beard, M.D., Associate Clinical Professor of Ophthalmology, University of California Medical School, *San Jose, California*

10:00 a.m. **Intermission to Visit Exhibits**

10:30 a.m. **LACRIMAL TRAUMA AND RECONSTRUCTION OF BONY ORBIT**

Doctor Beard

11:30 a.m. **QUESTIONS AND ANSWERS**

#### SECTION ON RADIOLOGY

**Donald F. Mauritson, M.D., Tulsa, Presiding**

9:00 a.m. **RADIOGRAPHIC SIGNS OF INTRAPERITONEAL BLEEDING**

James J. McCort, M.D., Associate Clinical Professor of Radiology, Stanford University School of Medicine, and Director of Radiology, Santa Clara Valley Medical Clinic, *San Jose, California*

9:50 a.m. **QUESTIONS AND ANSWERS**

10:00 a.m. **Intermission to Visit Exhibits**

10:30 a.m. **RADIOGRAPHIC SIGNS OF RETROPERITONEAL HEMORRHAGE**

Doctor McCort

10:50 a.m. **COMMONLY ENCOUNTERED SYNDROMES IN ABDOMINAL TRAUMA**

Doctor McCort

11:25 a.m. **QUESTIONS AND ANSWERS**

#### SECTION ON SURGERY

**Benjamin H. Gaston, M.D., Muskogee, Presiding**

9:00 a.m. **HOSPITAL CARE OF THE SEVERELY INJURED**

Alan P. Thal, M.D., Professor of Surgery, University of Kansas School of Medicine, *Kansas City, Kansas*

9:40 a.m. **PULMONARY EMBOLISM**

Lazar J. Greenfield, M.D., Associate Professor of Surgery, University of Oklahoma Medical Center, *Oklahoma City*

10:00 a.m. **MANAGEMENT OF TRAUMA TO THE GENITOURINARY SYSTEM**

Donald B. Halverstadt, M.D., Assistant Professor of Urology and Pediatrics, University of Oklahoma Medical Center, *Oklahoma City*

10:20 a.m. **Intermission to Visit Exhibits**

10:40 a.m. **SEVERE UPPER ABDOMINAL INJURY INVOLVING DUODENUM AND PANCREAS**

Doctor Thal



- 11:20 a.m. CURRENT RESEARCH IN TRAUMA TO THE CENTRAL NERVOUS SYSTEM  
Robert G. Fisher, M.D., Professor of Surgery and Chief, Division of Neurosurgery, University of Oklahoma Medical Center, *Oklahoma City*
- 11:40 a.m. CURRENT STATUS OF EXTREMITY REPLANTATION  
G. Rainey Williams, M.D., Professor of Surgery, University of Oklahoma Medical Center, *Oklahoma City*

**SECTION ON PSYCHIATRY**  
**Frank Hladky, Jr., M.D., Tulsa, Presiding**

- 9:00 a.m. TRAUMATIC NEUROSIS  
Jay T. Shurley, M.D., Research Professor of Psychiatry, University of Oklahoma Medical Center, *Oklahoma City*
- 9:30 a.m. SYSTEMS FOR DELIVERY OF MENTAL HEALTH SERVICE  
Albert J. Glass, M.D., Clinical Professor of Psychiatry, University of Oklahoma Medical Center, *Oklahoma City*
- 10:30 a.m. Intermission to Visit Exhibits
- 11:00 a.m. DRUG DEPENDENCE  
Brigadier Richard Phillipson, M.D., Director, Drug and Alcoholism Section, British Health Services, *London, England*
- 12:00 noon QUESTIONS AND ANSWERS

## Saturday Afternoon, May 17th, 1969

**SECTION ON ANESTHESIOLOGY**  
**Duane E. Brothers, M.D., Tulsa, Presiding**

- 1:30 p.m. BIOCHEMISTRY OF SHOCK  
William S. Howland, M.D., Chairman, Department of Anesthesiology, Memorial Hospital for Cancer and Allied Diseases, *New York, New York*
- 2:30 p.m. Intermission to Visit Exhibits
- 3:00 p.m. ANESTHETIC MANAGEMENT OF THE SEVERELY TRAUMATIZED PATIENT  
A. H. Giesecke, Jr., M.D., Associate Professor of Anesthesiology, University of Texas Southwestern Medical School, *Dallas, Texas*
- 4:00 p.m. QUESTIONS AND ANSWERS

**SECTION ON DERMATOLOGY**

**William R. R. Loney II, M.D., Bartlesville, Presiding**

- 1:30 p.m. SELECTED ASPECTS OF CUTANEOUS ELECTRON MICROSCOPY  
Robert L. Olson, M.D., Assistant Professor of Dermatology, University of Oklahoma Medical Center, *Oklahoma City*
- 1:50 p.m. LOCAL VITAMIN A THERAPY  
Vincent P. Barranco, M.D., *Tulsa*
- 2:10 p.m. EXFOLIATIVE DERMATITIS—A TEN-YEAR EXPERIENCE  
Mark A. Everett, M.D., Professor and Chairman of the Department of Dermatology, University of Oklahoma Medical Center, *Oklahoma City*
- 2:40 p.m. DERMATOHISTOPATHY AS A DIAGNOSTIC TOOL IN DERMATOLOGY  
Robert W. Goltz, M.D., Chairman of the Department of Dermatology, University of Colorado School of Medicine, *Denver, Colorado*
- 3:10 p.m. Intermission to Visit Exhibits
- 3:30 p.m. PANEL: TREATMENT OF COMMON DIFFICULT DERMATOSES  
All program participants  
William R. R. Loney II, M.D., *Bartlesville*, Chairman

**SECTION ON GENERAL PRACTICE**  
**Ed A. Brashear, M.D., Tulsa, Presiding**

- 1:30 p.m. SEMINAR: EVALUATION AND TREATMENT OF PERCEPTUAL DISORDERS  
*Participants:*  
Ellidee D. Thomas, M.D., Assistant Clinical Professor of Pediatrics, University of Oklahoma Medical Center, *Tulsa*  
Nelda Ferguson, Ph.D., *Oklahoma City*  
Betsy Walloch, M.D., *Tulsa*
- 3:00 p.m. Intermission to Visit Exhibits
- 3:20 p.m. QUESTIONS AND ANSWERS



# Entertainment Schedule

## OYSTER CRACK

6:30 p.m. • May 15th • Crystal Ballroom • Mayo

Physicians and wives are invited to an hour-long complimentary feast of oysters on the half-shell—plus baked specialties such as Oysters Rockefeller, Casino and Bienville—at the OSMA “Oyster Crack” in the Mayo

Hotel. Beer and soft drinks will be served.

Sponsored by the C. L. Frates and Wilson and Wilson insurance agencies, OSMA insurance counselors.

## GALA GASLIGHT PARTY

8:00 p.m. • May 16th • Crystal Ballroom • Mayo

A nostalgic return to the Roaring Twenties, the Gaslight Party will feature the trumpet and band of popular Buddy Billen; song stylist Smoky Durham, the talented dancers of Tulsa’s Pink Barn Studio, Go-Go Girls, and a psychedelic light show.

There will be a light sandwich buffet supper served mid-evening, plus plenty of goobers, pretzels and draught beer throughout the party. B.Y.O.L (Set-ups provided.)

This party is a regular sellout, so order tickets in advance from the OSMA at only \$7.50 each.



## INAUGURAL DINNER-DANCE

6:30 p.m. • May 17th • Mayo

Beginning with a cocktail party at 6:30 p.m., in the Mayo’s Pompeian Court and concluding with dancing ’til midnight, the Inaugural Dinner-Dance is the highlight of OSMA’s annual social calendar. After cocktails, there’s a gourmet banquet with wine service, the inauguration of Hillard E. Denyer, M.D., as OSMA President, entertainment by the famous Browning Family, and dancing to the Joe Linde Orchestra.

The six sisters and two brothers of the Browning Family will join mother and father to present one of America’s top musical variety shows. Don’t miss the wholesome entertainment provided by this attractive and talented family of vocalists and instrumentalists!

Tickets should be purchased in advance from the OSMA at the below-cost price of \$10.00 each.





# Technical Exhibitors

The Technical Exhibit of the 63rd Annual Meeting of Oklahoma State Medical Association will be held on the third floor of the Tulsa Assembly Center.

- |   |  |
|---|--|
| <p>Abbott Laboratories<br/>         American Pension Investments, Inc.<br/>         Americana Corporation<br/>         Astra Pharmaceutical Products, Inc.<br/>         Audio Equipment Company<br/>         Automated Management Systems<br/>         Ayerst Laboratories<br/>         Bache and Co., Inc.<br/>         Beam's Seat Belt Sales<br/>         Beverly Hills Hospital<br/>         Bristol Laboratories<br/>         Cain's Coffee Company<br/>         *Ciba Pharmaceutical Company<br/>         Coca-Cola USA<br/>         Jackie Cooper Oldsmobile<br/>         Dictaphone Corporation<br/>         The Emko Company<br/>         Encyclopaedia Britannica<br/>         Exercycle of Oklahoma<br/>         Flint Laboratories<br/>         Geigy Pharmaceuticals<br/>         Gerber Products Company<br/>         Hoechst Pharmaceutical Company<br/>         Imperial Fashions<br/>         Insurance Company of North America<br/>         Investors Diversified Services, Inc.<br/>         John Hancock Mutual Life Insurance Co.<br/>         **Eli Lilly and Company<br/>         Mead Johnson Laboratories<br/>         Medco Products Company, Inc.<br/>         MedicaRents Inc.<br/>         Medical Consultants, Inc.<br/>         Merck Sharp and Dohme</p> | <p>Mid-Continent Surgical Supply Company<br/>         Niagara Cyclo-Massage of Oklahoma<br/>         Oklahoma Blue Cross-Blue Shield<br/>         Oklahoma Regional Medical Program<br/>         Ortho Pharmaceutical Corporation<br/>         OSMA Group Insurance<br/>         Parke, Davis and Company<br/>         Pfizer Laboratories<br/>         Professional Management Midwest<br/>         Programmed Learning, Inc.<br/>         Republic National Bank<br/>         R. J. Reynolds Tobacco Company<br/>         J. B. Roerig<br/>         William H. Rorer, Inc.<br/>         Safeguard Business Systems<br/>         Sandoz Pharmaceuticals<br/>         G. D. Searle and Company<br/>         Seven-Up Bottling Company<br/>         Smith Kline and French Laboratories<br/>         SOFT, Inc.<br/>         Southwestern Bell Telephone Co.<br/>         E. R. Squibb and Sons<br/>         Stover Corporation<br/>         **Strassenburgh Laboratories<br/>         Unimed, Inc.<br/>         The Upjohn Company<br/>         USV Pharmaceutical Corporation<br/>         Video Electronic Systems, Inc.<br/>         Warner-Chilcott Laboratories<br/>         Barney Welch and Associates<br/>         Westwood Pharmaceuticals<br/>         Winthrop Laboratories<br/>         Wyeth Laboratories</p> |
|---|--|
- \*Technical exhibitor and contributor to Scientific Program  
 \*\*Contributor to Scientific Program

# Scientific And Institutional Exhibits

- |   |  |
|---|--|
| <p>Cardiac Catheterization—Albert L. Shirkey, M.D., R. Wayne Neal, M.D., Norman L. Bartlett, M.D., Tulsa</p> <p>Hair Transplantation—D. B. Stough, III, M.D., Hot Springs, Arkansas</p> <p>Help for the Arthritic Hand—L. Lee Lankford, M.D., Dallas, Texas</p> <p>Lymphangiography — Norman L. Bartlett, M.D., Tulsa</p> | <p>College of American Pathologists<br/>         Federal Aviation Administration<br/>         Oklahoma Council for Health Careers<br/>         Oklahoma Heart Association<br/>         Oklahoma Medical Political Action<br/>         OSMA Cults and Quackery Committee<br/>         OSMA Immunization Committee<br/>         Oklahoma Thoracic Society<br/>         Southern Medical Association<br/>         United Cerebral Palsy</p> |
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# A G E N D A\*

## House of Delegates Meetings

### ANNUAL MEETING—OPENING SESSION

9:00 a.m., May 16th, Fourth Floor, Tulsa Assembly Center

- |                                     |                                |
|-------------------------------------|--------------------------------|
| I. Call to Order                    | VII. Board of Trustees Report  |
| II. Report of Credentials Committee | VIII. Treasurer's Report       |
| III. Introduction of Guests         | IX. Council, Committee Reports |
| IV. Remarks of Speaker              | X. Introduction of Resolutions |
| V. Nominations for Elections        | XI. Necrology Report           |
| VI. Report of President             |                                |

(Reference Committees will meet at 4:00 p.m., May 16th, in third and fourth floor meeting rooms, Tulsa Assembly Center)

### ANNUAL MEETING—CLOSING SESSION

9:00 a.m., May 17th, Fourth Floor, Tulsa Assembly Center

- |                                     |                |
|-------------------------------------|----------------|
| I. Call to Order                    | IV. Elections  |
| II. Report of Credentials Committee | V. Adjournment |
| III. Reference Committee Reports    |                |

\*Condensed Version, Subject to Modification

### OFFICERS TO BE ELECTED

President-Elect (One-Year Term)

Vice-President (One-Year Term)

Delegate to the AMA (Two-Year Term)

Alternate Delegate to the AMA (Two-Year Term)

Trustees From Districts XI through XIV

### IMPORTANT

*Council and Committee Reports to be considered by the House of Delegates will be mailed to all Delegates, Alternate Delegates and Presidents of County Medical Societies.*



# Oklahoma State Medical Association

## 1969 DELEGATES AND ALTERNATES

SOCIETY	DELEGATE	ALTERNATE DELEGATE
ALFALFA WOODS	John X. Blender, M.D.	Ed L. Calhoon, M.D.
ATOKA BRYAN COAL	Leroy L. Engles, M.D.	J. T. Colwick, Jr., M.D.
BECKHAM (Roger Mills)	H. K. Speed, M.D.	Wm. M. Leebron, M.D.
BLAINE	R. A. Conley, M.D.	Billy D. Dotter, M.D.
CADDO	Philip W. Head, M.D.	James A. Hill, M.D.
CANADIAN	F. W. Hollingsworth, M.D.	E. W. Young, M.D.
CARTER LOVE MARSHALL	Frank W. Clark, M.D.	John H. Veazey, M.D.
	James V. Miller, M.D.	Edward L. Koger, M.D.
CHOCTAW PUSHMATAHA	Bill E. Woodruff, M.D.	Henry D. Wolfe, M.D.
CLEVELAND McCLAIN	James L. Haddock, M.D.	Charles J. Shaw, M.D.
	Guy V. Rice, M.D.	W. George Long, M.D.
	E. A. McGrew, M.D.	William C. McCurdy, Jr., M.D.
COMANCHE	W. A. Matthey, M.D.	Donald Wicker, M.D.
COTTON	Robert Hillis, M.D.	(Not Reported)
COOKSON HILLS (Cherokee, Adair and Sequoyah)	P. H. Medearis, M.D.	Herbert A. Masters, M.D.
CRAIG DELAWARE OTTAWA	John E. Highland, M.D.	Donald Olson, M.D.
CREEK	Robert G. White, M.D.	Merrill S. Bartlett, M.D.
CUSTER	Ross Deputy, M.D.	Marshall Ingram, M.D.
EAST CENTRAL (Muskogee, Wagoner and McIntosh)	Ann K. Kent, M.D.	Bartis Kent, M.D.
	Marvin Elkins, M.D.	Robert Honea, M.D.
	Glen Berkenbile, M.D.	Richard Pentecost, M.D.
	Tom Gafford, M.D.	(Not Reported)
GARFIELD (Grant)	Paul H. Rempel, M.D.	Mark D. Holcomb, M.D.
	John A. McIntyre, M.D.	George T. Ross, M.D.
	William R. Smith, M.D.	Robert D. Shuttee, M.D.
GARVIN	M. E. Robberson, M.D.	John M. Moore, M.D.
GRADY	J. W. McDoniel, M.D.	Harvey Elkouri, M.D.
GREER HARMON	Robert P. Metcalf, M.D.	Dwight D. Pierson, M.D.
HUGHES SEMINOLE	Jack Parrish, M.D.	Claude Knight, M.D.
JACKSON	Malcolm Mollison, M.D.	Robert S. Srigley, M.D.
	Wayne A. Starkey, M.D.	Lowell N. Templer, M.D.
JEFFERSON	Harold Stout, M.D.	W. A. Heflin, M.D.
KAY	Don E. Becker, M.D.	Harold Houk, M.D.
NOBLE	A. M. Brown, Jr., M.D.	Charles Martin, M.D.
KINGFISHER	F. C. Lattimore, M.D.	
KIOWA WASHITA	Roy W. Anderson, M.D.	L. Gordon Livingston, M.D.
LeFLORE HASKELL	J. D. Powell, M.D.	R. K. Alexander, M.D.
LINCOLN	Harold T. Baugh, M.D.	William I. Jones, M.D.
LOGAN	James S. Petty, M.D.	R. F. Ringrose, M.D.
McCURTAIN	Thomas E. Rhea, M.D.	Thomas D. Howard, M.D.
MURRAY	R. W. Lewis, M.D.	
NORTHWEST (Beaver, Dewey, Ellis, Harper and Woodward)	Richard H. Burgtorf, M.D.	Ralph G. Obermiller, M.D.
	M. K. Braly, M.D.	Joe L. Duer, M.D.
OKFUSKEE	Charles C. Elliott, M.D.	Charles A. Cashman, M.D.



**OKLAHOMA**

Thomas N. Lynn, M.D.  
R. B. Carl, M.D.  
John W. Drake, M.D.  
Lynn H. Harrison, M.D.  
Charles W. Cathey, M.D.  
J. B. Snow, Jr., M.D.  
George H. Garrison, M.D.  
Lucien Kavan, M.D.  
F. H. McGregor, M.D.  
Don F. Rhinehart, M.D.  
Lloyd A. Owens, M.D.  
Wm. A. Cunningham, M.D.  
Barney J. Limes, M.D.  
S. N. Stone, Jr., M.D.  
Robert S. Ellis, M.D.  
Charles D. Bodine, M.D.  
J. B. Eskridge, III, M.D.  
Elwood Herndon, M.D.  
Kent Braden, M.D.  
Paul A. Barrett, M.D.  
Clarence Robison, M.D.  
Jack A. Barney, M.D.  
Haven W. Mankin, M.D.  
Marcus B. Shook, M.D.  
James P. Bell, M.D.  
Charles M. Harvey, M.D.  
Edmond H. Kalmon, M.D.  
Bob J. Rutledge, M.D.  
Richard L. Hughes, M.D.  
C. Jack Young, M.D.  
R. L. Alexander, Jr., M.D.  
Richard W. Loy, M.D.  
George R. Smith, M.D.  
H. L. Ratliff, M.D.  
H. V. Schaff, M.D.  
George M. Brown, M.D.  
Clarence P. Taylor, M.D.  
David C. Ramsay, M.D.  
Leon C. Combs, M.D.  
Pat Williams, M.D.

**OKMULGEE****OSAGE****PAYNE****PAWNEE****PITTSBURG**

(Latimer)

**PONTOTOC**

(Johnston)

**POTTAWATOMIE****ROGERS****MAYES****STEPHENS****TEXAS****CIMARRON****TILLMAN****TULSA**

Casper H. Smith, M.D.  
E. L. Buford, M.D.  
  
Jack D. Honaker, M.D.  
Myra A. Peters, M.D.  
Robert D. Grubb, M.D.  
Emil E. Palik, M.D.  
James E. White, M.D.  
Thomas W. Taylor, M.D.  
Roger V. Haglund, M.D.  
C. S. Lewis, Jr., M.D.  
Donald L. Brawner, M.D.  
Robert K. Endres, M.D.  
S. Y. Andelman, M.D.  
Donald Bobek, M.D.  
R. W. Goen, M.D.  
John E. Kauth, M.D.  
Robert L. Anderson, M.D.  
Duane E. Brothers, M.D.  
Homer D. Hardy, M.D.  
Norman L. Dunitz, M.D.  
Robert A. Northrup, M.D.  
J. W. Owen, Jr., M.D.  
John Reid, M.D.  
Clair Liebrand, M.D.

R. Q. Goodwin, M.D.  
William E. Hood, Jr., M.D.  
William N. Harsha, M.D.  
Carl A. Krieger, M.D.  
G. Rainey Williams, M.D.  
Bertha M. Levy, M.D.  
Robert Sukman, M.D.  
Mark R. Johnson, M.D.  
Felix R. Kay, M.D.  
P. D. Casper, M.D.  
I. C. McLendon, M.D.  
David A. Campbell, M.D.  
Vance A. Bradford, M.D.  
Carter Moody, M.D.  
Ralph A. Smith, M.D.  
Thomas E. Acers, M.D.  
Thomas H. Henley, M.D.  
H. T. Avey, M.D.  
Lal D. Threlkeld, M.D.  
Charles N. Atkins, M.D.  
A. Stanley Bailey, M.D.  
David C. Lowry, M.D.  
William B. Renfrow, M.D.  
R. A. McLauchlin, M.D.  
S. R. Shaver, M.D.  
John F. Montroy, M.D.  
E. E. Shircliff, M.D.  
John W. Records, M.D.  
Thomas C. Points, M.D.  
M. T. Buxton, Jr., M.D.  
Floyd T. Hubbard, M.D.  
Vincent Mazzarella, M.D.  
Edward M. Thorp, M.D.  
Jack R. Vaught, M.D.  
E. D. Greenberger, M.D.  
William G. Blanchard, M.D.  
F. J. Martin, M.D.  
Carl D. Wiseman, M.D.  
Roy O. Kelly, Jr., M.D.  
(County Society Members)

William K. Walker, M.D.  
R. L. Cozine, M.D.

Roger G. Johnson, M.D.  
Byron W. Steele, Jr., M.D.  
Theodore Turnbull, M.D.  
Ralph S. McCants, M.D.  
Thomas L. Ozment, M.D.  
Beryl D. Henwood, M.D.  
Floyd F. Miller, M.D.  
Byron L. Bailey, M.D.  
Frank A. Clingan, M.D.  
C. M. Coffey, M.D.  
Leonard L. Kishner, M.D.  
James H. Neal, Jr., M.D.  
Jack E. Hale, M.D.  
Joe E. Tyler, M.D.  
James C. Smith, Jr., M.D.  
Robert L. Kramer, M.D.  
B. E. Guenther, M.D.  
Harold C. Wood, M.D.  
Denton B. Thomas, M.D.  
V. M. Lockard, M.D.  
O. L. Grigsby, M.D.  
William J. Russum, M.D.

**WASHINGTON**  
**NOWATA**



## WOMAN'S AUXILIARY

OKLAHOMA STATE MEDICAL ASSOCIATION

MAY 15th, 16th, 17th, 1969

MAYO HOTEL

TULSA, OKLAHOMA

Mrs. Daniel R. Storts, Convention Chairman



MRS. ALFRED T. BAKER  
Durant  
*President*



MRS. J. HARTWELL DUNN  
Oklahoma City  
*President-Elect*



MRS. C. C. LONG  
Ozark, Arkansas  
*President, Auxiliary to  
the American Medical Association*



MRS. VIRGIL RAY FORESTER  
Oklahoma City  
*President, Auxiliary to the  
Southern Medical Association*





MRS. W. C. BRADFORD  
Oklahoma City  
*Founder*



MRS. SAMUEL R.  
TURNER  
Tulsa  
*Councilor, Southern  
Medical Association*



MRS. WILLIAM  
LEEbron  
Elk City  
*First Vice-President*



MRS. E. COTTER  
MURRAY  
Oklahoma City  
*Second Vice-President*



MRS. J. SAM LITTLE  
Norman  
*Recording Secretary*



MRS. JAMES DEWAR  
Oklahoma City  
*Treasurer*



MRS. RICHARD B. PRICE  
Oklahoma City  
*Treasurer-Elect*



MRS. DANIEL  
R. STORTS  
Tulsa  
*Convention Chairman*



MRS. FLOYD F. MILLER  
Tulsa  
*Convention Co-Chairman*



## GENERAL INFORMATION

### REGISTRATION—FOUNDER'S ROOM

Mezzanine—Mayo Hotel

Mrs. Warren G. Gwartney, Chairman

Thursday, May 15th .....	1:30-5:00 p.m.
Friday, May 16th .....	8:30-5:00 p.m.
Saturday, May 17th .....	8:30-1:00 p.m.

### HOSPITALITY ROOM—FOUNDER'S ROOM

Mezzanine—Mayo Hotel

Mrs. William G. Mays, Chairman

This room will be open during registration hours, Thursday, Friday and Saturday, for the convenience of guests. Refreshments will be available on Thursday afternoon. Continental breakfast will be served on Friday and Saturday, 8:30-9:30 a.m., complimentary, for guests, courtesy of the convention committee. Card tables and cards will be present for your pleasure.

### DOCTORS' DAY EXHIBITS

Mezzanine—Mayo Hotel  
Thursday, Friday and Saturday

Mrs. Elias Margo, Chairman

### HOBBY SHOW EXHIBITS AND DOCTORS' FLOWER SHOW

Civic Assembly Center  
Thursday, Friday and Saturday

Mrs. George Adams, Chairman

### MEDICAL ADVISORS

Harlan Thomas, M.D., Tulsa  
Rex Kenyon, M.D., Oklahoma City  
Joe Duer, M.D., Woodward

### CONVENTION COMMITTEE

CHAIRMAN: Mrs. Daniel R. Storts  
CO-CHAIRMAN: Mrs. Floyd F. Miller

Courtesy .....	Mrs. Allen B. Eddington
Credentials .....	Mrs. Robert E. Dillman
Decorations .....	Mrs. Joseph L. McDonald
Fashion Show .....	Mrs. C. William Simcoe
Gifts .....	Mrs. Perry Crawford
Hobby Show .....	Mrs. George M. Adams
Hospitality .....	Mrs. William G. Mays
Luncheon .....	Mrs. Raymond E. Peebles
Page and Timekeeper .....	Mrs. David O. Merifield
	Mrs. Harold C. Wood

Publicity .....	Mrs. Jack W. Newport
Registration .....	Mrs. Warren G. Gwartney
Past-Presidents' Breakfast .....	Mrs. J. Ferrell York
Post-Convention Luncheon .....	Mrs. George Miller
Tickets .....	Mrs. Robert Stanley White

Tickets for Past-Presidents' Breakfast, Luncheon and Fashion Show, and the Post-Convention Luncheon will be on sale at the Registration Desk, Founder's Room, Mezzanine, Mayo Hotel, Thursday, Friday and Saturday, Mrs. R. S. White, Chairman.

## PROGRAM

### THURSDAY, MAY 15th, 1969

1:30-5:00 p.m.—REGISTRATION AND HOSPITALITY, Founder's Room, Mezzanine, Mayo Hotel.

4:00 p.m.—PRE-CONVENTION BOARD MEETING, Summit Club, Fourth National Bank Building, Sixth Street at Boulder. Mrs. Alfred T. Baker, President, Presiding

Hostesses: Mrs. Daniel R. Storts and Mrs. Floyd F. Miller. EXECUTIVE BOARD ONLY.

6:30 p.m.—OYSTER CRACK, Crystal Ballroom, 16th Floor, Mayo Hotel. Jack Richardson, M.D., Chairman. COMPLIMENTARY.

### FRIDAY, MAY 16th, 1969

8:00 a.m.—PAST-PRESIDENTS' BREAKFAST, Room A, Second Floor, Mayo Hotel. Mrs. J. Ferrell York, Chairman.

8:30-5:00 p.m.—REGISTRATION AND HOSPITALITY, Founder's Room, Mezzanine, Mayo Hotel

8:30-9:30 a.m.—CONTINENTAL BREAKFAST, Founder's Room, Mezzanine, Mayo Hotel

9:30 a.m.—FIRST GENERAL SESSION, Emerald Room, Mezzanine, Mayo Hotel. Mrs. Alfred T. Baker, President, Woman's Auxiliary to the Oklahoma State Medical Association, presiding.

CALL TO ORDER: Mrs. Baker.

INVOCATION: Mrs. Worth Gross, Tulsa.

PLEDGE OF LOYALTY: Mrs. Scott Hendren, wife of the President of the Oklahoma State Medical Association.

WELCOME: Mrs. Harlan Thomas, President, Woman's Auxiliary to the Tulsa County Medical Society.

RESPONSE: Mrs. Tom Sparks, Ardmore, Past-President, Woman's Auxiliary to the Oklahoma State Medical Association.

ANNOUNCEMENTS: Mrs. Daniel R. Storts, Tulsa, Convention Chairman.



GREETINGS: H. E. Denyer, M.D., President-Elect, Oklahoma State Medical Association.

INTRODUCTION OF SPECIAL GUESTS: Mrs. Baker.

GREETINGS: Mrs. C. C. Long, Ozark, Arkansas, President, Woman's Auxiliary to the American Medical Association.

Mrs. Burt C. Montague, 6th Regional Vice-President, Woman's Auxiliary, Student American Medical Association.

ROLL CALL BY COUNTIES: Mrs. J. Sam Little, Norman, Secretary.

REPORT OF CREDENTIALS COMMITTEE: Mrs. Robert Dillman, Tulsa.

READING OF MINUTES: Mrs. Little.

TREASURER'S REPORT: Mrs. James Dewar, Oklahoma City.

REPORTS OF OFFICERS: (two-minute reports)  
First Vice-President: Mrs. William M. Leebron, Elk City.

Second Vice-President: Mrs. E. Cotter Murray, Oklahoma City.

Editor "*Sooner Physician's Wife*": Mrs. W. R. R. Loney, Tulsa.

Editor Auxiliary Page, "*Journal-OSMA*": Mrs. George Miller, Tulsa.

REPORT OF OSMA COMMITTEE ON CULTS AND QUACKERY: James B. Silman, M.D.

REPORT OF CHAIRMAN: (two-minute reports)  
A.M.A.E.R.F.: Mrs. John Williams, Enid.  
By-Laws and Revisions: Mrs. Knight Braly, Woodward.

Community Health: Mrs. Charles Bodine, Oklahoma City.

Doctors' Day: Mrs. Elias Margo, Oklahoma City.

Health Careers: Mrs. Port Johnson, Muskogee.  
International Health: Mrs. John Kienzle, Shawnee.

Legislation: Mrs. J. R. Stacy, Oklahoma City.

Loan Fund: Mrs. Tom Sparks, Ardmore.

Mental Health: Mrs. J. T. Colwick, Durant.

Program: Mrs. Virgil Ray Forester, Oklahoma City.

Rural Health: Mrs. Joseph Kelso, Oklahoma City.

Safety and Disaster Preparedness: Mrs. Raymond Peeples, Tulsa.

W.A.S.A.M.A.: Mrs. James Bell, Oklahoma City.

REPORT OF NOMINATING COMMITTEE: Mrs. J. Hartwell Dunn, President-Elect, Woman's Auxiliary to the Oklahoma State Medical Association.

MEMORIAL SERVICE: Mrs. Charles Smith, Oklahoma City.

ADJOURNMENT

12:00 noon—"TULIP TIME IN TULSA"

LUNCHEON AND FASHION SHOW, Crystal Ballroom, 16th Floor, Mayo Hotel.

Fashions and Shoes by Woolf Brothers of Tulsa.  
Coiffures by Lady Tulsa Penthouse.

Door Prizes: Woolf's and Convention Committee.  
Mrs. Raymond Peeples, Luncheon Chairman.

Mrs. C. William Simcoe, Fashion Show Chairman.  
Mrs. Joseph McDonald, Decorations Chairman.

8:00-12:00 midnight—GASLIGHT PARTY, Crystal Ballroom, Mayo Hotel. Professional Entertainment.  
Jack Richardson, M.D., Chairman.

## SATURDAY, MAY 17th, 1969

8:30-1:00 p.m.—REGISTRATION AND HOSPITALITY, Founder's Room, Mezzanine, Mayo Hotel.

8:30-9:30 a.m.—CONTINENTAL BREAKFAST, Founder's Room, Mezzanine, Mayo Hotel.

9:30 a.m.—SECOND GENERAL SESSION, Emerald Room, Mezzanine, Mayo Hotel. Mrs. Alfred T. Baker, President, presiding.

INVOCATION: Mrs. W. J. Williams, Bethany.

PLEDGE OF LOYALTY: Mrs. H. E. Denyer, wife of the President-Elect, Oklahoma State Medical Association.

WELCOME: Mrs. John Dague, President-Elect, Woman's Auxiliary to the Tulsa County Medical Society.

ANNOUNCEMENTS: Mrs. Floyd F. Miller, Tulsa, Convention Co-Chairman.

GREETINGS: Doctor Scott Hendren, President, Oklahoma State Medical Association.

INTRODUCTION OF GUESTS: Mrs. Baker.

GUEST SPEAKER: Mrs. Virgil Ray Forester, President, Woman's Auxiliary to the Southern Medical Association.

ROLL CALL BY COUNTIES

CREDENTIALS REPORT: Mrs. Robert Dillman.

REPORTS OF COUNTY PRESIDENTS:

Atoka-Bryan-Coal: Mrs. W. K. Haynie, Durant.  
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Pontotoc-Johnston: Mrs. John Roberts, Ada.

Pottawatomie: Mrs. Frank Howard, Shawnee.

Stephens: Mrs. James Jones, Duncan.

Tulsa: Mrs. Harlan Thomas, Tulsa.



Washington-Nowata: Mrs. William M. Aldredge, Bartlesville.

UNFINISHED BUSINESS

NEW BUSINESS

ELECTION OF DELEGATES TO NATIONAL CONVENTION

ELECTION OF OFFICERS

INSTALLATION OF 1969-1970 OFFICERS AND COUNCILORS: Mrs. C. C. Long.

PRESENTATION OF PAST-PRESIDENTS' EMBLEM

PRESENTATION OF PRESIDENT'S GAVEL AND PIN: Mrs. Baker.

INAUGURAL ADDRESS: Mrs. J. Hartwell Dunn, President, Woman's Auxiliary to the Oklahoma State Medical Association.

## ADJOURNMENT—1969 SESSION

12:30 p.m.—POST-CONVENTION LUNCHEON AND SCHOOL OF INSTRUCTION, Tulip Room, Garden Restaurant, Utica Square. Mrs. J. Hartwell Dunn, President, presiding. Mrs. George Miller, Chairman.

6:30 p.m.—SOCIAL HOUR AND RECEPTION, Pompeian Court, Mayo Hotel.

7:30 p.m.—PRESIDENT'S INAUGURAL DINNER, Crystal Ballroom, Mayo Hotel.

8:00-9:00 p.m.—Browning Family, Professional Entertainment.

9:00-12:00 midnight — PRESIDENT'S INAUGURAL BALL, Joe Linde's Orchestra, Crystal Ballroom, Mayo Hotel

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## Miscellaneous Advertisements

G. P.'s NEEDED as family physicians in completely G.P.-oriented and organized city near Tulsa. 126-bed Joint Commission Accredited Hospital. Contact Key B, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

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WANTED: GENERAL PRACTITIONER; also have room for pediatrician and ophthalmologist. This is a fully equipped clinic with laboratory and x-ray facilities, located in a city of about 35,000, educational center with university and two large factories, located next door to a fine recreation center, good wheat and cattle country. The city is very clean and ideal for rearing and educating your family. Owner retiring, wonderful opportunity for someone to take over lucrative practice well established for 35 years. Contact Key A., The Journal of the Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

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FOR SALE: A complete set of tonsillectomy instruments including a suction and pump machine; electric autoclave; doctor's examination table; Mayo table. Contact R. C. Mills, M.D., Suite 1001, Hightower Building, Oklahoma City.

FOR SALE: One RA-71 rotating anode x-ray tube and Mattern 200 MA - 300 MA at 85 TKB full wave x-ray control and transformer, and paraphernalia. Price \$5000.00. One improved Hugh H. Young Urological examination and operation table with built in buckey, and dual motor-driven table base, manufactured by Liebel-Flarsheim Company. Price \$1,200.00. All items are used but in practically new condition. Contact Mike Fite, M.D., 3212 West Broadway, Muskogee, Oklahoma 74401. Phone 918 687-5477.



## Miscellaneous Advertisements Continued

OBSTETRIC AND GYNECOLOGY SPECIALIST desires association or group practice in the Tulsa area beginning August 6th, 1969. Graduate of Baylor College of Medicine in 1963; residency at Texas Medical Center; completing military obligations. Contact R. Bryan Boatright, M.D., 6 C Cunningham Street, Westover Air Force Base, Massachusetts. Phone 413 557-7251 or 413 593-5258.

SURGEON and GENERAL PRACTITIONER with training and special interest in surgery to associate with physician doing general medicine. Large practice in suburb of Oklahoma City with spacious beautiful modern office and facilities. One and a half minutes to modern hospital soon to expand to 200 beds. Excellent school system — excellent opportunity. Contact Key C, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City, Oklahoma 73118.

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PHYSICIAN, AGE 36, rotating internship, board eligible in internal medicine, six years private practice, seeking association with established physician or group in Oklahoma City or Norman area. Write Harold Berliner, M.D., 1320 N.E. 55th Street, Oklahoma City, Oklahoma or phone in the evening, 405 427-6711.

FOR LEASE: Office suitable for internist, surgeon or general practitioner. Maintenance services included. Call 478-2567 or WI 6-5678, if interested.

ANESTHESIOLOGY RESIDENCIES available—Fully approved two-year program in 600-bed general hospital includes neurosurgery, thoracic, and cardiovascular surgery. Annual anesthetics administered—over 13,000. Stipend—\$8100 and \$9300. Board and laundry. A. N. Heinrichs, M.D., Director, Department of Anesthesia, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

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PEDIATRICIAN WANTED: Established board-certified pediatrician seeking associate. University town in Oklahoma. Contact Key S, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City, 73118. □



The

JOURNAL

MAY  
1969  
Vol. 62, No. 5

of the Oklahoma State Medical Association

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## *Tiger? What Tiger?*

CERTAINLY NO ONE can deny that cigarette smoking is an unhealthy habit. All of the evidence gathered from an impressive amount of expert research indicates that it is a habit dangerous even beyond our present level of understanding. The current campaign against the habit being conducted in and by our society is thoroughly justified. Every effort made in the interest of public information and education concerning the effects of cigarette smoking is laudable. Probably without exception everyone of us hopes that these collective efforts eventually will result in the total abolition of this unhealthy, unclean and extravagant indulgence.

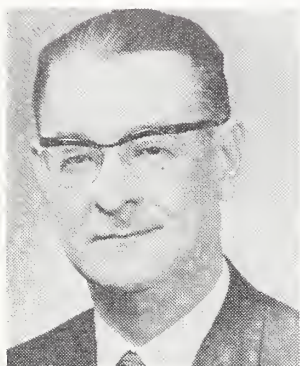
Doesn't it seem strange, however, if not frankly mysterious, that our society with all its enlightened and evangelistic "health organizations," both voluntary and governmental, have not conducted a similar campaign against the infinitely more dangerous habit of alcohol drinking? Why isn't there a law requiring a "health hazard" warning on the labels of all alcoholic beverages? Although the annals of investigation and research are filled with damning evidence it is unfortunately not necessary to search them in order to build a case against the daily ingestion of alcohol. We can see the evidence in the steadily rising traffic death toll, in our general and psychiatric hospitals, even in our divorce and bankruptcy courts. There are literally millions of recognized alcoholics in our society and

undoubtedly tens of millions of unrecognized alcoholics. The habit can be so cryptic that probably the only method of even estimating the total number of alcoholics in our nation would be to appraise our total consumption of alcohol in relationship to the non-abstaining population. The social injuries inflicted by not only the "excessive" use of alcohol but the steady, unremitting daily consumption of alcohol simply stagger the imagination. By comparison the social ills resulting from cigarette smoking are trivial.

This is not an essay designed to damn cigarette smoking or alcohol drinking. Our purpose is to call attention to the fact that our society and our government seem to be inclined to fire cannons at gnats and brandish pea shooters at tigers. Exorcisations become fads and we fall over each other in pursuit of a popular prey. When such sociological eruptions concern the health of mankind all of us as citizens *and* as physicians should become involved. We have a special responsibility to see that reason, order and balance is maintained by all the organizations and agencies promoting health-related campaigns. We must help them identify our most imminent dangers and we must solicit support for those existing organizations (or if necessary create new organizations) which are dedicated to the elimination of those dangers. If we abdicate these responsibilities we will be party to the squandering of precious health education dollars and to the disenchantment of a public decimated by tigers while engaged in a war on gnats.—  
MRJ □



## A SYNERGISTIC RELATIONSHIP



The past few years have brought so many multifaceted forces to bear upon our profession that its whole mission has been changed. This change, often born of controversy and frustration, has set a challenge for us all.

During these same years, our profession has divided into more than 20 specialties and subspecialties, each with its own problems, its own concerns, its own aspirations.

These forces upon our profession and this fragmentation within it have served to divide us. Our state association, captive of a situation it did not create, has been forced to be a REACTOR to what happens rather than the INITIATOR. In too many instances, our state association has been out-

numbered and out-financed, turning from its role as champion of improved professionalism to the guardian and buffer for the remuneration of doctors and the protector of their conditions of work.

This organizational year will be dedicated to the consolidation of these "fragments" into a synergistic relationship.

Together, we must establish and announce the common goals which bind all medical groups together in these times. Only by allegiance to the state association can we translate our limited physical and financial capability into effective policies and priorities. Full cooperation by the total membership and a dedicated staff will make these goals possible.

Together, we can move with forceful authority toward significant accomplishment. □

Sincerely yours,

*Willard E. Denger*



# Anterior Surgical Approach For Cervical Disc Disease

BOB J. RUTLEDGE, M.D.  
DON F. RHINEHART, M.D.  
A. C. LISLE, JR., M.D.

*Prompt relief of symptoms with minimal morbidity, postoperative pain, and brief hospitalization are some of the advantages of the anterior approach to the cervical spine.*

THIS IS A report of 100 consecutive cases of cervical radiculitis caused by pathological cervical disc treated by the anterior approach. Cervical disc disease can cause not only radiculitis, but headache, neckache, secondary cervical muscle spasm, and spinal cord symptoms by pressure upon the spinal cord. Until 1957, practically all of these syndromes, when treated surgically, were done posteriorly by doing a hemilaminectomy or total laminectomy. Although some cases were sporadically approached anteriorly by different physicians as early as 1953, the impetus for consideration of the anterior approach was not received until Ralph B. Cloward, M.D., reported 47 cases.\* Although the results in selected cases treated posteriorly were good, this approach has the following disadvantages: (1) The disc is hard to

expose because the cervical roots are short and the spinal cord covers most of the disc. (2) Many of the discs are calcified and cannot be removed necessitating treatment primarily by foraminal decompression, *i.e.*, removing the bone over the posterior aspect of the nerve. (3) The operation is technically difficult. (4) The patients have considerable pain postoperatively. The advantages of the anterior approach are: (1) The disc can be removed without disturbing the spinal cord or nerve roots. (2) This is a direct approach to the disc making it easier to remove. (3) The operation is not nearly as laborious. (4) The patients have very little postoperative pain and a shorter period of hospitalization.

Although one of us had done an anterior disc removal and fusion in 1960, we first started using the Cloward technique for cervical radiculitis in 1966. Most of these cases have been done using Cloward instruments and his technique; however, we usually use myelography prior to surgery for positive evidence of disc disease and localization, where he relied more on discography. A few of these cases were done with excision of the disc without fusion.

The patient is placed in the supine position and the neck extended by a roll under his shoulders and a sand bag supporting his neck. The patient is given a general intratracheal anesthetic. An incision is made approximately an inch and one-half long from the midline in the neck to the anterior edge of the right sternocleidomastoid muscle.

\*CLOWARD, RALPH B. Anterior Approach For Ruptured Cervical Discs, *Journal of Neurosurgery*, 1958, 6: 602-617.



The incision is made at the level of the cricoid cartilage for exposing the disc between C6-7. The platysma muscle is split in the direction of its fibers and then the deep fascia is incised and the fascial plane between the sternocleidomastoid muscle, carotid bundle, and the tracheoesophageal bundle is developed bluntly. The disc space is then identified and a spinal needle is placed in the disc after retracting the tracheoesophageal bundle to the left. A polaroid x-ray is then taken to identify the correct disc. A  $\frac{5}{8}$ -inch bone dowel is removed from the ilium while the x-ray is being developed. This can be done through a small incision below the crest of the ilium. The fascia is cut in a stellate fashion and the gluteal muscle is separated in the direction of its fibers and then the periosteum is stripped from the ilium. After the dowel is removed, the opening in the bone is rubbed with bone wax and occasionally a small vessel in the muscle needs to be coagulated. The superficial fascia is closed with -ooo- plain suture and the skin closed with -oooo- silk. It is rarely necessary to leave a drain. After identifying the correct disc, the longissimus colli muscles are coagulated and divided and then special rake retractors are hooked into the muscles, effectively retracting the carotid bundle to the right and the tracheoesophageal bundle to the left without placing direct pressure on these structures. A smooth retractor is then placed in a longitudinal direction to spread the fascia in this plane. The disc is then incised with an 11 blade knife and that disc, which can be easily removed, is done so with Takahashi forceps. The anterior-posterior diameter of the disc is then measured and a guide is placed in the disc space in the midline or slightly to the side of the pain. A guard with an adjustable screw is set at the depth previously measured, and this is placed over the guide and impacted into the adjacent vertebrae after removing the guide. The guard has four sharp spikes which go into the vertebra rather easily. A hand drill on a Hudson brace is then used to drill a half inch hole between the two vertebrae. An assistant holds the guard and when the collar reaches the end of the guard the adjustable screw can be lowered a six-

teenth of an inch at a time in order to drill out the cortex and osteophytes posteriorly. The opening is cleaned out by suction and usually it is necessary to remove some calcium posteriorly with forceps and a curved curette. If there is no evidence of perforation of the posterior longitudinal ligament, a curved curette is placed out laterally and then by pulling anteriorly the osteophyte is removed. If there is evidence of an opening in the posterior longitudinal ligament, a freely ruptured disc can be removed through this, or the ligament is excised and then the curette is placed on the edge of the vertebrae, curetting anteriorly, thereby removing disc and osteophyte. Minimal bleeding is controlled by gelfoam and coagulation. A small spreader is then placed out laterally toward the facets and this spreads the vertebra a slight amount. The bone dowel is then placed in the half-inch hole and traction is applied to the neck by the anesthesiologist

---

*A graduate of the University of Oklahoma School of Medicine, Bob J. Rutledge, M.D., has been certified by the American Board of Neurological Surgery. In addition to his private practice, he is Associate Professor of Surgery at his school of graduation. His medical affiliations include the American College of Surgeons, the International College of Surgeons, the American Association of Neurological Surgeons and the Congress of Neurological Surgeons.*

*Don F. Rhinehart, M.D., is an instructor at his school of graduation, the University of Oklahoma School of Medicine. He is certified by the American Board of Neurological Surgery and a member of the American Association of Neurological Surgeons, the Congress of Neurological Surgeons and the Rocky Mountain Neurological Society.*

*A. C. Lisle, Jr., M.D., graduated from the University of Oklahoma School of Medicine, where he is now a Clinical Professor. He is certified by the American Board of Neurological Surgery. He is a member of the American Board of Neurological Surgery, the American College of Surgeons, the American Association of Neurological Surgeons and the Congress of Neurological Surgeons.*



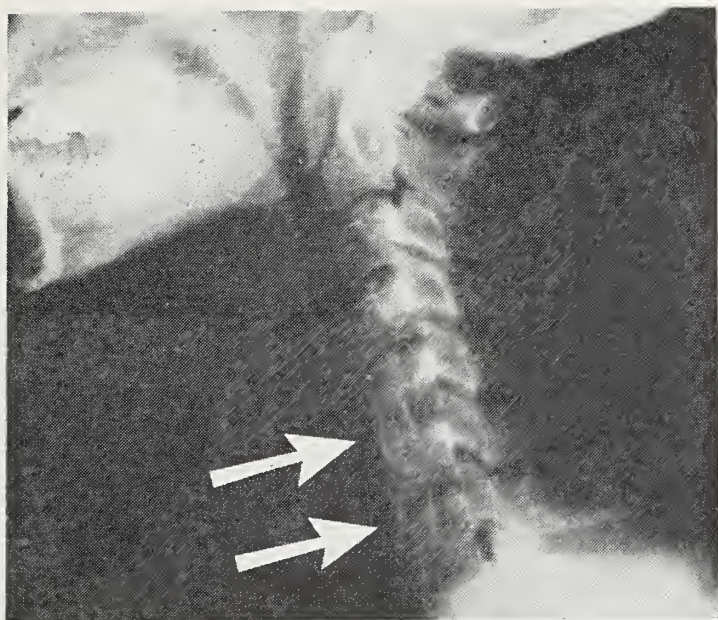


Figure 1. Bone dowel between C-5 and 6 and 6 and 7 vertebra two weeks postoperatively.

and the bone dowel impacted into the opening. A soft tissue drain is placed and sutures are used only in the subcutaneous tissue and skin.

These patients do very well following surgery. Their main complaint is a sore throat and some difficulty in swallowing. Since the muscle and ligament is not taken off the iliac crest, there is no particular hip or leg pain. Some of the patients have shoulder pain which is caused by the pad under their shoulders. The patients can immediately turn their head in any direction with the exception of backwards and can use a pillow. Some get up the same day of surgery and all patients may be up on the first postoperative day. The drain is removed from the neck on the first postoperative day. The sutures are removed from the neck on the second or third postoperative day and from the hip in seven days.

The patients operated in this series ranged from 23 to 65 years of age. There were 53 males and 47 females. Fifty-three patients were in the fifth decade of life. Many of these patients frequently have vague symptoms which are usually considered as cervical tension. All of our patients had pain in the shoulder girdle or upper extremity. Thirty-five percent had neckache and 14 percent had a major complaint of headache. There was no difference in the frequency of pain on the two sides. Ten patients had definite pain bilaterally. One-half of these patients complained of numbness and it was of localizing value as to the nerve root in-

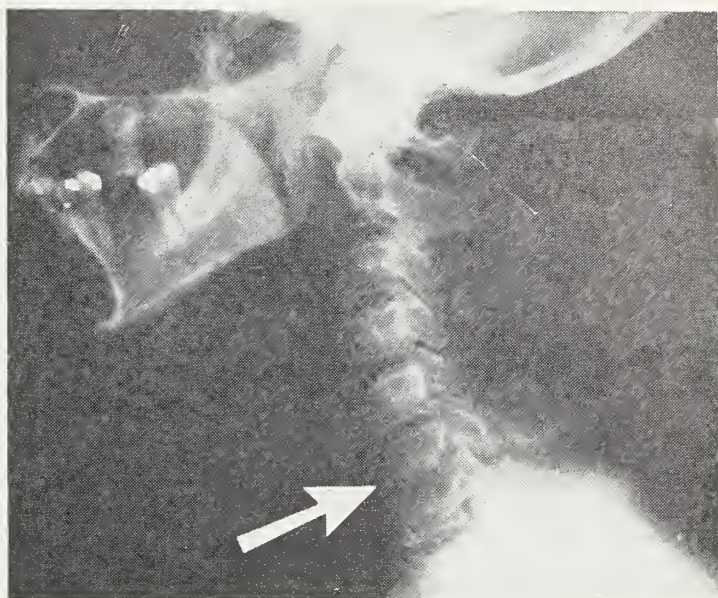


Figure 2. Fusion of C-6 and 7 vertebra ten weeks postoperatively.

volved in 26 cases. Twenty-five patients had muscular weakness and ten had objective muscular atrophy. The triceps muscle was weak in 11 cases, the biceps in eight and the deltoid in three. One patient had some weakness of the ipsilateral leg as well as the upper extremity. All but one patient had myelography and three had discograms when the myelogram was not definite. Eighty-one patients had the routine Cloward procedure of disc excision and fusion of one interspace. Seven patients had fusions of two interspaces, eight had excision of a disc at one interspace and excision and fusion of another interspace, four had excision of two discs without fusion, and two had just excision of one disc. Fifty-nine patients had involvement of the disc between C5-6, 49 between C6-7, 11 between C4-5, and one between C3-4 and C7-T1.

One patient had a serious complication of a Brown-Sequard syndrome. He has had continuous progressive improvement over a year but insufficient to permit return to ordinary manual labor. The other complications have been relatively minor and not permanent. A few patients have stated that there is a little area of numbness on the lower edge of the chin which is due to interruption of a cutaneous nerve by the incision. One patient complained of numbness over the distribution of the lateral femoral cutaneous nerve. The dowel came out and had to be replaced in one patient. Another patient who had two dowels removed, pulled part of the ilium off after going home. This



required no specific treatment. Four patients had hoarseness which was thought to be on the basis of involvement of the recurrent laryngeal nerve. All of these cleared within six to eight weeks. Two patients had a Horner's syndrome. Three patients had weakness of the serratus anterior muscle. Two of these were on the same side as the arm pain and cleared up within six to eight weeks. One patient had weakness on the opposite side of his pain. This cleared in four months. There was one retropharyngeal abscess (without bony involvement), requiring surgical drainage and another patient had an infection which was handled with antibiotics.

Postoperative x-rays usually reveal normal curvature of the spine but sometimes there will be reversal of the normal lordotic curve. We have not noticed any correlation between the postoperative x-ray picture and the clinical results. These patients are usually re-

examined in the office in about two weeks time and if they lead a sedentary life, they can return to their usual activities at that time. They can return to work in four, six or eight weeks depending on how heavy their work is, returning to ordinary manual labor in six to eight weeks.

#### SUMMARY

The anterior approach for cervical disc disease causing radiculitis has been reported in 100 consecutive cases over a two and a half year period with only one major complication. The patients are hospitalized a relatively short period of time and returned to their usual activities after brief convalescence with only minor discomfort. Follow-up to date, though brief, would lead us to believe that long term results will be good to excellent.

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# Management of Nosocomial Infections

PAXTON H. HOWARD, JR., M.D.  
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*Nosocomial infection—pertaining to a hospital or infirmary; more specifically, infections acquired as a result of hospitalization.*

**AS THE PRIMARY INFECTIONS** of man have come under control as the result of improved public health practices, hospital-acquired infections have assumed an increasingly important role in the morbidity and mortality due to infectious disease. It is the purpose of this paper to review the current concepts of hospital-acquired infections relative to their recognition and control.

Several excellent epidemiologic studies have demonstrated a significant change in the nature of hospital-acquired infections during the antibiotic era.<sup>1-3</sup> Up to one-third of hospitalized patients with infections, at any given time, may have acquired their infection while in the hospital. Similarly, five to ten percent of patients hospitalized for any reason may acquire a significant infection while in the hospital.<sup>4</sup> Although no anatomical site can be considered to be free of the risk of a hospital-acquired infection, the most common sites of infection include the

respiratory tract, the genitourinary tract and the skin. In recent years, gram-negative bacilli normally residing in the body have replaced staphylococci as the most common causative organisms in hospital-acquired infections. Other organisms ordinarily considered to be of low pathogenicity, such as protozoa and fungi, also have been an increasing problem.

Because of the seriousness of hospital-acquired infections, both the physician and the hospital have a responsibility to assure that this problem is kept to a minimum. The principles and management of hospital-acquired infections as outlined by Sanford<sup>5</sup> are as follows:

(1) *Recognition.* Careful surveillance of the hospital population for possible nosocomial infections must be maintained in order to recognize problems as they arise. Surveillance can be accomplished by review of laboratory reports of pathogenic organisms, from reports by nurses or physicians, by review of autopsy material, and by daily examination of all patients with temperature elevations. It is essential that certain individuals within the institution be delegated the responsibility of investigating any suspicious case of hospital-acquired infection. This is usually accomplished by having a hospital infection committee on which there are members representing the nursing service, the hospital administration, and the physician-staffs of each of the major departments, the surgical services and the micro-



biology laboratory. One or more individuals on the hospital infection committee must be delegated the authority to investigate fully all cases of hospital-acquired infection and to make recommendations for the correction of situations which might increase the risk to other patients or personnel.

(2) *Source.* It is usually possible to determine the source of a hospital infection by examination of equipment, medications, diagnostic procedures, and personnel with which the patient has come in contact while in the hospital.

(3) *Mode of Spread.* Once the source of infection has been determined, it is usually easy to postulate a mode of spread which carried the infection to the patient.

(4) *Control Measures.* The appropriate measures for the control and prevention of hospital infections are dependent upon the organisms involved, the source of the infection, and the mode of spread.

Some examples of the current types of hospital-acquired infections and methods of control are as follows:

a) *Staphylococcal Disease of the Newborn and His Family*<sup>6, 7</sup>

The neonate is colonized with staphylococci from the environment within 24 to 72 hours of birth. Certain virulent strains of staphylococci produce diseases which may become apparent before the infant's discharge from the hospital or, later, at home. These infections include impetigo, omphalitis, pneumonia, and septicemia in the infant, breast abscess in the mother and pyoderma in other family members. Hospital personnel may be carriers of these virulent strains of staphylococci and the newborn, once colonized, becomes a carrier.

Measures designed to control staphylococcal infections in the newborn nursery include daily hexachlorophene baths of the infant to decrease the staphylococcal colonization of his skin, the isolation of infected infants and the removal of staphylococcal carriers from the nursery environment. Still in the investigational phase are attempts at colonization of newborn infants with an "avirulent" strain of staphylococci. The "prophy-

lactic" use of antibiotics has been generally disappointing in alleviating this problem.

b) *Staphylococcal Wound Infection*<sup>6, 7</sup>

*Staphylococcus aureus* may be introduced into clean surgical wounds at the time of surgery. Such occurrences are usually traceable to a staphylococcal carrier on the operative team. This may result in wound abscess, disruption of the wound and bacteremia. Staphylococci can be further identified by phage typing and by their antibiotic-sensitivity patterns. The recovery of the same strain of staphylococcus from several postoperative infections requires culturing of all of the members of the surgical team common to each of the infected patients. Control of staphylococcal wound infection involves identification of carriers and their exclusion from the operating areas until their infections are eliminated through the use of antibiotics and improved personal hygiene. Also important is the proper surgical preparation of the patient with hexachlorophene soap or other germicidal agents. It has been amply demonstrated that "prophylactic" antibiotics do not diminish the incidence of postoperative infection in "clean" surgery.

c) *Urinary Tract Infections*<sup>8</sup>

Pathogenic bacteria can be introduced into the urinary tract after a single bladder catheterization or cystoscopic examination. The urinary tract is uniformly infected after the use of an indwelling bladder catheter for

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longer than 72 hours. Chronic urinary tract infection, acute pyelonephritis and bacteremia may result from this contamination of the urinary tract. Every hospitalized patient who becomes febrile after urinary tract manipulation must be suspected of having one of these complications. Control of the hospital-acquired urinary tract infection includes the avoidance of unnecessary urinary tract manipulation, including catheterization. Catheterization and diagnostic procedures must be done with the strictest aseptic techniques. When indwelling bladder catheters are required for long periods of time, irrigation of the bladder with an antibiotic solution has significantly reduced the incidence of urinary tract infections. Systemic antibiotics produce no prophylaxis in this situation.

#### d) *Gastroenteritis*

Gastroenteritis produced by certain enteropathogenic strains of *E. coli* (E.E.C.) has been associated principally with hospitalized infants.<sup>9</sup> The premature or debilitated infant is affected most by these organisms. Diarrheal disease of varying severity may become epidemic in nurseries for the newborn. Although E.E.C. may be recovered from asymptomatic nursing personnel working in affected nursery areas, the exact mode of transmission is unclear.

Two types of hospital-acquired gastroenteritis have been recognized recently in adult patients. *Salmonella* gastroenteritis has followed the oral use of carmine-red dye contaminated with *Salmonellae*.<sup>10</sup> One large outbreak of gastroenteritis was traced to uncooked eggs contaminated by *Salmonellae* used in the preparation of eggnog which was given to debilitated patients as a protein supplement.<sup>11</sup> Uncooked egg products should not be given to any debilitated patient.

Staphylococcal enterocolitis is being seen with increasing frequency following the use of antibiotics designed to "prepare" the bowel for surgery and in the management of hepatic coma.<sup>6</sup> This produces a particularly fulminant diarrhea. Examination of the stool by Gram stain smears reveals a predominance of gram-positive cocci. This infection is associated with a high mortality despite the use of specific anti-staphylococcal therapy.

#### e) *Bacteremia Secondary to Intravenous Catheters*<sup>12</sup>

Intravenous catheters such as "cut-downs," central venous pressure catheters and intravenous needles may become infected with organisms of low-grade pathogenicity after lying intravenously for 48 hours or more. Phlebitis at the site of the infusion usually is the first sign that infection is present. These infections cannot be prevented by the use of parenteral antibiotics. "Catheter sepsis" accounted for ten percent of bacteremias in one medical center.

Control of this type of infection requires the replacement and relocation of intravenous needles and catheters at least every 72 hours, or at the first sign of local inflammation. Recent studies have shown that topical antibiotics applied to the cut-down site and the maintenance of sterile precautions when the catheter must be manipulated will reduce the incidence of intravenous catheter-associated bacteremias.

#### f) *Viral Diseases*<sup>13</sup>

Frequently, individuals who are in the incubation period of viral diseases such as chickenpox, mumps, or measles may be admitted to the hospital and subsequently expose other individuals in the hospital. Before the elective admission of any patient to the hospital, the physician should ascertain, to the best of his ability, that the individual has had no recent exposure to viral diseases. The patient with extensive eczema or other skin conditions who may be exposed to personnel or patients with herpes simplex or with recent smallpox vaccination is in special jeopardy, as are patients with certain malignancies. A similar viral hazard to hospitalized patients and personnel is the individual with undiagnosed infectious hepatitis. Every patient who is admitted to the hospital with the possibility of hepatitis should be kept in isolation until the diagnosis of hepatitis can be excluded.

#### g) *Respiratory Infections*<sup>14</sup>

For many years an underrated cause of nosocomial disease has been infection of the respiratory tract. Common organisms include the pneumococcus and the staphylococcus, but in recent years attention has been directed to the role of gram-negative bacilli such as *Pseudomonas*, *Proteus*, *Klebsiella*, *Enterobacter* and *Serratia*. It now seems



clear that these latter organisms may be spread from patient to patient by artificial ventilators and aerosol generators in which the organisms are able to multiply. Control is achieved by careful bacteriologic monitoring of the aerosol produced by the machine and by adequate cleaning of the nebulization equipment itself. □

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## HEW PROPOSED MEDICAID PAYMENTS BASED ON BLUE SHIELD PLANS

According to the new undersecretary of HEW, John Veneman, the department is studying the possibility of creating a fee schedule for the Medicaid program that is based on the prevailing Blue Shield payment plans for non-government medical service.

Veneman made his comment in a news conference held on April 15th to discuss the 1970 budget proposals for HEW. He said that the proposal was an action, "to limit further increases in the cost of the Medical program: payment schedules will be established for doctors and dentists which are based on the prevailing Blue Shield payment plans for non-governmental medical service . . ."

The American Medical Association through its president, Dwight L. Wilbur, M.D., and the National Association of Blue Shield Plans through its president, John W. Castellucci, replied to Mr. Veneman's comments immediately.

In a letter to Robert Finch, Secretary of HEW, President Wilbur stated, "It is important to recognize that there are many variables in the circumstances of payment for medical and hospital services. Local needs and resources, the educational and motivational levels of the people, the economic conditions of the state and the community are among the reasons for the differences exhibited by the payment patterns of the Blue Shield plans and health insurance companies. These circumstances must be the foundation for any policies involving costs

and payments. No universal pattern—no matter how many variations it may try to provide—can be imposed on the thousands of localities without wrecking havoc and probably increasing inefficiency and costs."

The president went on to say that no one wants to impair the ability of the health care industry to meet the health care needs of all the people.

National Blue Shield President Castellucci stated, "A basic point that must be understood is that the Medicaid program has a broad scope of benefits and most Blue Shield fee schedules do not relate to many of these benefit areas." He went on to state that the Blue Shield Plans have now reached a point where acceptance of the usual and customary approach is so general that many of the plans are abandoning the fee schedule approach altogether.

Wilbur went on to point out that there is an interrelationship between burgeoning needs, the expansion of capabilities, the rapid demand for skilled manpower and a tight labor market and many other factors that must be considered in all deliberations of policies and potential actions. He stated, "Accordingly, the knowledge and judgment of the nation's physicians—as well as of the prepayment plans, health insurance industry, hospitals, the allied health professions, the actuaries and others—must be enlisted in your battle against the health care portion of the inflation problem." □



# Pericarditis and Hemorrhagic Pleural Effusion Associated With Cold Agglutinin Positive Pneumonia

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WILLIAM S. PUGSLEY, M.D.

*An elderly lady presented with pericarditis, hemorrhagic pleural effusions and elevated cold agglutinin titers. Some unusual aspects of cold agglutinin associated disease are discussed.*

**MYCOPLASMA INFECTION** manifests itself most commonly as an upper respiratory and pulmonary infection, its incidence reaching epidemic proportions in military populations. Other manifestations of Mycoplasma disease not as frequently observed may be significant, especially in an elderly person. The patient to be presented had clinical evidence of primary atypical pneumonia and elevated cold agglutinin titers. Unusual clinical and laboratory findings were also noted.

## REPORT OF A CASE

M.D., an 80-year-old white female, had been in good health until September, 1966, at which time a barium enema examination led to a barium impaction, followed by infarction of a segment of intestine which required laparotomy, partial jejunal resection, and a transverse decompressing colostomy. In January, 1967, she again underwent a

laparotomy for re-anastomosis of the colostomy, which was followed by a normal post-operative course except for a weight loss from 105 to 88 pounds. At a nursing home on April 20, 1967, she developed a febrile illness characterized by a non-productive cough, fever of 102° F and anorexia. Penicillin was administered over the next ten days without benefit and she was admitted to the hospital on May 1, 1967 with a cough, anorexia and weakness. She also complained of shortness of breath and orthopnea which began April 29, 1967 and was accompanied by a vague, nonpleuritic chest pain. Her past medical history revealed only a supra-cervical hysterectomy at age 40 and a biopsy of a (benign) breast lesion ten years previously. The patient did not smoke cigarettes.

One brother died of tuberculosis many years ago and another brother died of cancer of the lung.

Physical examination revealed an elderly, frail, moderately dehydrated, white female appearing chronically ill and in moderate distress. She was notably weak and required assistance to get into bed. Her vital signs were as follows: BP 130/50, P 100/min, Wgt. 88 lbs., R 30/min and T 100° F. The oral mucosa was reddened. A few moist rales were heard at both lung bases. Breath sounds were markedly decreased over the lower lung fields bilaterally and the percussion note was dull over the right posterior thorax below the level of the eighth rib, and on the left posterior thorax below the level of the ninth rib. A pericardial friction rub was heard over the precordium. The laparotomy

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and colostomy scars were well healed. The uterine cervix was small and smooth and the fundus was absent. The adnexa were atrophic. The remainder of the physical findings were within normal limits. Significant laboratory data included the following values: Hemoglobin on admission was 9.2 gm/100 cc with a white blood cell count (WBC) of 14,200 with 77 percent polymorphonuclear leucocytes, one percent bands, 17 percent lymphocytes, one percent basophiles, two percent monocytes and two percent eosinophiles. Urinalysis revealed many white blood cells but was otherwise unremarkable. SGOT was 45 units with a normal of eight to 40 units. LE cell preparations were found to be negative on three examinations. Blood urea nitrogen (BUN) was 21 mg/100 cc. The chest x-ray showed a slightly enlarged cardiac silhouette and bilateral pleural effusions which obscured the lower one-third of each lung. The electrocardiogram revealed low voltage in the limb leads but no other abnormalities. A thoracentesis performed on the right hemithorax on May 1st, 1967, produced 550 cc of serosanguineous fluid which contained 3.2 grams of protein per 100 ml and 11,200 red blood cells/mm<sup>3</sup> (RBC). Aerobic, anerobic, fungal and mycobacterial cultures of the thoracentesis fluid were negative and remained negative. On May 6, 1967, the cold agglutinin titer was 1:512 and on May 11th and May 16th, 1967, was 1:16 and 1:32 respectively.

With the finding of serosanguineous pleural effusion and respiratory distress it was decided that the patient might be the victim of multiple pulmonary emboli with infarction, therefore anticoagulation was instituted with heparin and later maintained with "Coumadin.<sup>®</sup>" (The serosanguineous pleural effusion was discovered prior to anticoagulant therapy.)

On May 5th, 1967, the temperature decreased to 98.6° F and remained normal throughout the remainder of the patient's hospitalization. Because of continued shortness of breath and orthopnea, the patient was digitalized on May 5th, 1967. On May 7th, 1967, the pericardial friction rub disappeared and did not reappear. On May 11th,

1967, since the patient was not improving clinically, coupled with the early historical data which was compatible with primary atypical pneumonia and the elevated cold agglutinin titers, Mycoplasma infection was entertained as a diagnosis, and tetracycline, 250 mg, given four times a day was started. During the next three to four days the patient's cough decreased, her chest pain disappeared and she exhibited improvement of her appetite and feeling of well being. Anticoagulants were discontinued on May 19th, 1967. Tetracycline was continued until May 25th, 1967, in the same dosage. A second thoracentesis was performed on May 16th, 1967, and fluid was obtained from the right hemithorax. The thoracentesis fluid contained 1,130 cells per cc, having a differential count of 960 crenated red blood cells, 110 noncrenated red blood cells, 30 polymorphonuclear leucocytes and 30 lymphocytes. A post-thoracentesis chest x-ray taken on May 16th, 1967, revealed some clearing of the pleural effusion and a (previously obscured?) right lower lobe infiltrate. The infiltrate cleared by May 22nd, 1967, and by May 28th, 1967, the chest x-ray was normal with the exception of minimal blunting of the costophrenic angles bilaterally. Heart size was noted to decrease slowly over a period of about three weeks until it was within normal limits.

#### COMMENT

Primary atypical pneumonia has been recognized as a disease entity for nearly three decades,<sup>1,2</sup> and the Mycoplasma organism is

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now known to cause a large number of cases of pneumonia each year, being especially common in young military populations.<sup>3</sup> Non-gonococcal arthritis was shown to be associated with some cases of "T-strain" mycoplasma by Shepard<sup>4</sup> in 1954, and further evidence for its being a causative agent was presented by the same author in 1965.<sup>5</sup> Ford, *et al.*,<sup>6</sup> also felt that mycoplasma played a role in non-gonococcal arthritis. Mycoplasma pneumonia can hemolyze human as well as other erythrocytes as shown by Clyde in 1963.<sup>7</sup> Rifkind, *et al.*,<sup>8</sup> noted hemorrhagic myringitis in 11 of 27 men inoculated with second passage monkey kidney tissue cultured mycoplasma pneumonia.

Mufson, *et al.*,<sup>9</sup> described an encephalitis in one of their cases of Mycoplasma pneumonia, with a pleocytosis of the spinal fluid (98 white blood cells/mm<sup>3</sup>, 87 percent lymphocytes). The patient apparently followed a typical encephalitis course and got completely well with return of spinal fluid to normal. Other diseases attributed to Mycoplasma have been myocarditis,<sup>10</sup> polyneuritis, hemolytic anemia, sinusitis, dermatitis, atrial fibrillation, bronchiectasis and cardiovascular collapse. Pleural effusion and one case of transient pericarditis was reported by Grayston, *et al.*,<sup>11</sup> this being the only case of pericarditis secondary to Mycoplasma that we could find in the literature. Decaneg and Lee<sup>12</sup> reported one case of Mycoplasma-induced massive pleural effusion in a 13-year-old girl and two diagnostic thoracentesis revealed clear fluid which failed to grow bacteria on routine cultures.

Our case is somewhat unique in that it presented with bilateral serosanguineous pleural effusion, a transient pericarditis, and a pneumonia, the latter being evident on chest x-ray following thoracentesis. The patient failed to improve clinically until antibiotic therapy was instituted following which

there was resolution of her pleural effusions, cough, shortness of breath and improvement in her feeling of well being. While these findings are suggestive of a beneficial effect from the antibiotics, a true cause and effect relationship in this regard would be difficult to prove.

It is interesting that this was an elderly lady who had had major bowel surgery just a few months earlier and had lost a great deal of weight. She also was depressed about the infirmities of old age. It has been pointed out that the attack rate for cold agglutinin pneumonia infection is highest in the young adult age group, but conversely one might expect it to be a more serious disease in the aged and infirmed. Further work regarding morbidity, mortality and attack rates in the above mentioned segment of the population needs to be accomplished. □

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# Review: Anti-Rh Immunoglobulin in Prevention of Erythroblastosis Fetalis

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*Maternal and newborn illnesses related to Rh factor problems, for years poorly understood, for more years dreaded may be yielding to new understanding and management.*

## DEVELOPMENT OF RH IMMUNOGLOBULIN

LEVINE, *et al.*, in 1941 first described the role of the Rh factor in the pathogenesis of erythroblastosis fetalis or hemolytic disease of the unborn.<sup>4</sup> This disease in its most morbid form is the result of sensitization and immunization of an Rh negative mother to Rh positive antigens on the erythrocytes of blood from an extraneous source such as transfusion of Rh positive blood or transplacental hemorrhage from an Rh positive fetus. The 7s isoantibodies formed in the mother may cross the placenta and cause hemolysis of the erythrocytes of the fetus or newborn child, as well as other changes.

After Levine's work, three lines of ap-

proach to the control of erythroblastosis fetalis were evident: (1) to protect the newborn or the fetus from the effects of the antibody; (2) to "neutralize" or inactivate an antibody already formed or (3) to prevent immunization of Rh negative women. Until recent years, only the first avenue of attack had been used. Attempts along this line have been: (A) exchange transfusions and supportive care for the infant, with a survival rate approaching 95 percent reported in some series; (B) premature delivery in suspected cases of erythroblastosis fetalis, with the morbidity and mortality of premature delivery often equaling that of the disease; (C) intrauterine transfusions of the fetus with definite, but limited success. The second suggested mode of control has had little support or investigation other than an unsuccessful search for an "Rh hapten to neutralize maternal antibodies." This neutralization theory would be important if the mother were already sensitized to Rh antigen and therefore deserves some consideration. The third suggested method of control, prevention of sensitization and immunization of Rh negative women, has had many unsuccessful therapeutic trials. Among them are the use of vitamin C to preserve the placental barrier, the administration of unrelated antigens to suppress Rh antibody formation by competition of antigens, the

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\*Prepared as partial completion of the course in Gynecology and Obstetrics, University of Oklahoma School of Medicine.



use of hematinics to combat fetal anemia and even the administration of cortisone.<sup>3</sup>

Much has been done along the lines of prevention of erythroblastosis fetalis since 1960 when two groups, working independently in Liverpool and in New York City, started investigating the concept that it might be possible to prevent initial sensitization of Rh negative mothers by giving anti-Rh antibody immediately following childbirth. The two groups independently arrived at this concept from the same set of facts, namely that it had been shown that Rh positive fetuses who were ABO incompatible with their Rh negative mother rarely sensitized her to the Rh antigen. This was thought to be due to immediate removal of the fetal erythrocyte from the maternal bloodstream by the ABO system, thus preventing stimulus to the anti-Rh antibody mechanism.<sup>4</sup>

This theory plus the work of Theobald Smith in 1909 using neutralized mixtures of diphtheria toxin and an excess of antitoxin to show that a specific antibody administered in excess to an individual, prevents immunization by injections of the corresponding antigen, stimulated Freda, Gorman and Pollack at Columbia University to begin a program to explore the possibilities of using passive antibodies to prevent anti-Rh immunization.<sup>7</sup>

Supporting evidence of the feasibility of an immunosuppressive attack on hemolytic disease of the newborn came from Finn, *et al.*, in Liverpool when they, by use of differential acid elution of fetal and adult hemoglobin (as first described by Kleihauer in 1957) on 256 women shortly after delivery, were able to demonstrate a significant number of fetal cells in the maternal circulation in 30 (12 percent) of the cases. The quantity of fetal blood "transfused" to the mother at labor and delivery was greater than 5 ml in only four cases with the majority of women receiving less than one milliliter. None of the women in whom fetal cells were found had an ABO incompatible fetus. This confirmed the mechanism of protection; ABO incompatible cells are very rapidly eliminated and thus do not act as an effective Rh antigen. This possibly explains why the incidence of clinical erythroblastosis is much less than the incidence of Rh negative mothers with an Rh positive fetus. Fol-

low up of 85 Rh negative women of this group who had Rh positive infants revealed antibodies in three within three months of delivery. Two of these three received more than four milliliters of fetal blood at the time of birth, indicating the possibility of a dose-related phenomenon in the sensitization of the mother.<sup>5</sup>

This British group, and others, by serial fetal erythrocyte counts throughout pregnancy, labor, delivery and puerperium have shown that transplacental hemorrhage rarely occurs prior to labor and delivery, and when it does occur is rarely of sufficient quantity to stimulate the maternal immunity system. They also feel that the Kleihauer technique of acid elution could be used to determine the "high risk" population to whom antiserum should be given immediately after delivery in order to rapidly destroy fetal cells transferred at this time.<sup>5</sup>

Freda and his associates in 1960 had the following stated goals, (1) to develop a feasible and safe method of obtaining passive immunity to Rh antigen; (2) to confirm that the immunosuppression phenomenon was as effective in the Rh system as had been observed in other antigen-antibody systems; and if results were gratifying, (3) to try immunosuppression in mothers.<sup>9</sup> They extracted a purified fraction II gamma globulin from a pool of high titer incomplete (7s) anti-Rh donor plasma. This purified gamma globulin was very free of side effects and free of hepatitis virus. It had an antibody titer 100 times that of the original pooled serum and an intramuscular injection of five milliliters to Rh negative subjects produced antibody titers as high as 1:128. They called it Rh-immunoglobulin, and a similar procedure is used by Ortho in its manufacture of RhoGAM.<sup>9</sup>

With this first purified Rh immunoglobulin were made two safe and successful trials in Rh negative male volunteers from Sing Sing Prison, showing that active immunity did not develop if Rh-immunoglobulin were given 24 hours prior to intravenous Rh positive, ABO compatible erythrocyte adminis-

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tration or if Rh immunoglobulin were given within 72 hours after the intravenous infusion of Rh positive erythrocytes. They also found in this study that the passive immunity lasted for at least six weeks and up to 31 weeks but was totally absent in all subjects after 45 weeks. The immunoglobulin was cross-matched with the recipient's erythrocytes before its injection.<sup>9</sup>

#### CLINICAL TRIALS

In 1964 they began the first clinical trial. In this study, they injected 4.5 ml of the Rh immunoglobulin intramuscularly into non-immunized Rh negative mothers of ABO compatible Rh positive babies within 72 hours of delivery, treating alternant deliveries to obtain a treated and a control group.<sup>9</sup>

At about the same time that the Americans started their study, the British group, hoping to imitate the natural phenomenon of suppression of Rh immunity by ABO incompatibility, began similar studies using high titer anti-D whole plasma. When the Americans published their paper on production and use of Rh-immunoglobulin, the British began to use a similarly prepared purified gamma II globulin. They first used Rh negative male volunteers, then nulliparous post-menopausal Rh negative females and got excellent immunosuppressive results. They then used the Kleihauer acid elution technique and Cr<sup>51</sup> tagged fetal erythrocytes to show that the fetal Rh positive cells were removed from the maternal bloodstream at a very rapid rate.<sup>5</sup>

A third investigator, Hamilton, has been using 10 ml of plasma from sensitized Rh negative females since 1961. With a series of over 500 Rh negative mothers with ABO compatible Rh positive babies, he has collected the largest and the longest series of any individual investigator.<sup>11</sup>

#### THEORIES ON MECHANISM OF ACTION

The mode of action of Rh-immunoglobulin is a matter of conjecture. Freda felt that the circulating passive antibody may prevent antibody production by a specific feedback

mechanism, possibly, but not necessarily, mediated by an action on the antigen at an extracellular or intracellular site, rather than by a simple clearing of antigen.<sup>6, 8</sup> This view is supported by work in guinea pigs, showing that passive antibody administration delayed until after injected antigen has been completely cleared from the circulation can still inhibit the 7s immune response to bacteriophage.<sup>6, 8</sup> Finn, *et al.*, in England believe that the immunosuppression is simply a result of rapid clearing of the antigen by the antibody thus eliminating the antigenic stimulus.<sup>8, 10</sup> There is evidence to support both theories and they are not mutually exclusive. Perhaps both play a role.

#### RESULTS

Regardless of mode of action and theories which stimulated research, studies are being conducted around the world similarly and with similar results. A composite of some of the main reports appears in Table 1.\*<sup>11</sup>

TABLE I\*

Treated with Anti-Rh Immunoglobulin		Controls (Non-treated)	
At Risk	Immunized at 6 months after delivery	At Risk	Immunized at 6 months after delivery
First Rh+ 1,113	2	860	80
Pregnancy			
Subsequent 87	2	79	19
Rh+ Pregnancies			
Totals 1,200	4	939	99

From Table I\*, we can readily see that Rh-immunoglobulin is definitely effective in preventing immunization in the first at-risk pregnancy and is quite promising in preventing Rh immunization in subsequent pregnancies. The true test however will be to see if subsequent children develop erythroblastosis fetalis. There are preliminary reports along this line which are quite promising, with a zero incidence of erythroblastosis fetalis in second Rh positive ABO compatible infants born to treated Rh negative mothers while a comparable group of untreated controls may be expected to deliver erythroblastic newborns 30 to 50 percent of the time.

Hamilton in St. Louis<sup>11</sup> has the following results: of over 500 patients at risk, none have developed immunity with the first or

\*Table I composed from correspondence of C. A. Clark<sup>11</sup>



subsequent Rh positive, ABO compatible babies; 38 have had a second at-risk pregnancy with treatment and four of these have had a third at risk pregnancy also followed by treatment. Whereas none of these patients has developed immunity, 16 of his 88 controls have been actively immunized with a second pregnancy.

#### FAILURES OF Rh IMMUNOGLOBULIN TO SUPPRESS IMMUNIZATION

There have been several reports of failures<sup>12, 13, 14</sup> of the Rh immunoglobulin to suppress antibody formation; failure to prevent immunization of an Rh negative mother by an Rh positive fetus or failure to prevent antibody formation after a mismatched transfusion. In each of these cases, there was a proposed explanation for the failure. Among them (1) the transplacental hemorrhage may occur early enough in gestation and be of sufficient volume that the mother is immunized prior to the injection of the Rh-immunoglobulin; (2) the Rh-immunoglobulin may not be given in excess of the antigen and then the immune response is not only present, but is often enhanced through some unknown mechanism<sup>7</sup> or (3) the mother may have developed antibodies to the gamma globulin after a previous administration, e.g., after receiving anti-rubella gamma globulin.

#### PROBLEMS TO BE SOLVED

There are still more problems to be solved in the use of Rh immunoglobulin. Among those receiving current investigation are: (1) What is the latest time at which gamma globulin can be given effectively? Clarke, *et al.*, are planning a study in males to see if it is still immunosuppressive when given one week after an injection of Rh positive cells.<sup>10</sup> (2) What of prophylaxis during pregnancy? It has been shown that occasionally, though rarely, an effective immunizing dose of Rh positive fetal cells crosses the placenta before labor begins. Also it has been shown that no harm results from small doses of anti-D globulin given during pregnancy, but no one yet knows whether this is protective. It is known only that it doesn't cause fetal anemia but may cause a

positive Coomb's test on cord blood.<sup>10</sup> (3) How long does the passive immunity last? No one as yet has been able to find a definitive factor which controls the duration of protection.<sup>10</sup> (4) What is the optimal dose of anti-D gamma globulin? Everyone agrees that the current doses are far above those needed and there are currently several studies attempting to find the optimal dosage.<sup>10</sup>

Morbidity with the use of Rh immunoglobulin administration has been minimal with occasional local reactions and rare fevers. Anti-D gamma globulin has been given several times by error to women later found to be weakly Rh positive (D<sup>u</sup>) without untoward reaction. The possibility of sensitization and immunity to gamma globulin developing has been reported to be as high as five percent of treated women but would be a severe complication only in the event of administration of gamma globulin when the patient was hypogammaglobulinemic thus causing severe anaphylaxis.<sup>10</sup>

#### SUMMARY

In summary, the use of anti-Rh gamma globulin for the prevention of active immunization of Rh negative mothers likely to bear infants with hemolytic disease is very promising. The procedure is based on the observation that compatible matings in the ABO grouping are significantly more frequent in families in which hemolytic disease has occurred than in non-affected families. Also it has been found that volunteers could be more successfully immunized to Rh by injection of blood if the blood were ABO compatible. It was deduced that ABO incompatibility affords a degree of protection against Rh hemolytic disease. Fetal cells entering the maternal circulation, if ABO incompatible with the maternal cells and antibodies may be eliminated before they have time to act as Rh antigens.

On the basis of these observations, and with the object of promoting rapid removal of fetal cells, a group in Britain has started giving the Rh negative woman at risk of Rh immunization, soon after delivery, five milliliters of gamma globulin containing a very high titer of incomplete anti-Rho (D).

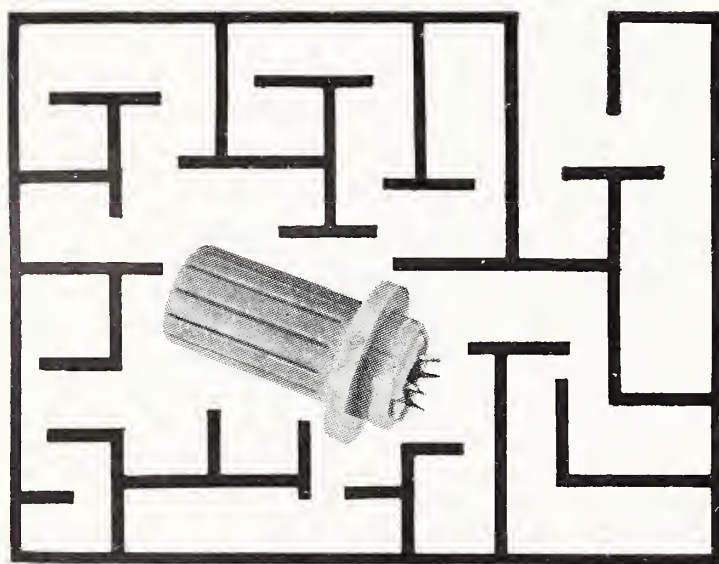
Another group, in America, has postulat-



ed that the antibody acts by a direct feedback mechanism on the antigen-antibody system to prevent immunization. They are using 4.5 ml of Rh immunoglobulin injected intramuscularly within 72 hours of delivery in the "at-risk" Rh negative mother.

The injection is given at this time because it is during labor, or shortly before, that the mother receives the largest infusion of fetal cells and sensitization is therefore more likely to occur. It was shown that the greater the number of fetal cells found in the maternal circulation after delivery, the greater the likelihood of subsequent immunization. Among mothers so treated, immunization in a subsequent pregnancy by an Rh positive fetus is a rare occurrence.

Though the Rh-immunoglobulin holds great promise, we still have found no solution for those women already sensitized; therefore, hemolytic disease of the newborn will not be a rarity in the obstetrical and pediatric services for at least ten to 15 years, even if the medical community comes to use



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Rh-immunoglobulin with great frequency in the next two or three years. □

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# Tumor Board Proceedings

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## CASE No. 9: Hypernephroma Metastatic to the Bladder

**PRESENTATION:** The patient is a 76-  
year-old Negro male, who came here about

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

three weeks ago with a history of intermittent gross, painless hematuria for several months. Ten days prior to his admission he had developed daily gross hematuria with the passage of clots. He had a syncopal episode the day before he came in and when he arrived here he had orthostatic hypotension, 3.8 grams percent of hemoglobin and a bladder full of blood clots. The clots were evacuated through the cystoscope and he received seven units of blood. An IVP revealed a large filling defect in both the right renal pelvis and in the left side of the bladder with approximately two plus dilatation of the left ureter down to the level of the bladder. The patient then was cystoscoped and this lesion was seen to be a large exophytic lesion which essentially replaced the left half of the bladder cavity. A biopsy was reported as showing poorly-differentiated carcinoma, and the patient was prepared for surgery.

The only abnormal liver function study reported was a total protein of 4.5 grams percent, with an albumin of 2.9 grams percent and a globulin of 1.6 grams percent. The man was taken to surgery eight days ago and underwent a right nephrectomy. A left cutaneous ureterostomy was done and the large mass in the bladder was left in place. The left hypogastric artery was ligated. It was felt that since the patient was 76 years old, he would not be able to tolerate a cystectomy at that time. He is presented now for recommendations concerning the management of this residual bladder cancer especially from the standpoint of the prevention of hemorrhage.



DOCTOR BOGARDUS: What did the renal lesion turn out to be?

PRESENTER: The kidney tumor was reported to be a hypernephroma.

DOCTOR BOGARDUS: He has two primaries then?

PRESENTER: I think the tumor in the bladder is the same as that in the kidney.

DOCTOR BOGARDUS: You think it is the same tumor with direct extension down the ureter?

PRESENTER: Yes, either seeding down the ureter or a blood borne metastasis.

DOCTOR BOGARDUS: The problem that he has right now is the mass in the bladder and the bleeding?

PRESENTER: Yes.

DOCTOR BOGARDUS: Does he have any other metastases?

PRESENTER: Not to our knowledge.

DOCTOR CONDIT: How long has it been since he bled?

PRESENTER: He has not bled since surgery. He has been up and around for five days.

DOCTOR BOGARDUS: Doctor Geyer, is there anything that you have to offer him surgically, right now?

DOCTOR GEYER: I do not think that it is technically possible to remove the bladder metastasis locally or even by cystectomy. We did ligate the hypogastric artery on the left side, hoping to control further hemorrhage. We do not know if this helped. His hemoglobin was down at the time of admission and it seemed that the bladder was the major source of bleeding.

DOCTOR BOGARDUS: Do you think this might have contributed to the control of the bleeding now?

DOCTOR GEYER: It may have.

DOCTOR BOGARDUS: I think the only alternative then is radiation therapy to the bladder, and see if we can shrink the remaining tumor. The arterial ligation may or may not have been a good idea at this point. If the tumor is no longer getting an adequate blood supply it may be anoxic and thus protected from the radiation therapy. This has to be weighed against the fact that he was bleeding from it.

DOCTOR CONDIT: What did you find at

operation . . . as to the extent of the tumor?

DOCTOR GEYER: The tumor had infiltrated the perivesical tissue on the left, and removal of the tumor would not have been complete if a cystectomy had been done.

DOCTOR CONDIT: How far did it extend in other directions?

PRESENTER: It was limited to the bladder.

DOCTOR BOGARDUS: So for all practical purposes, the tumor is still confined to the bladder or at least in the immediate perivesical area on the left. I think it would be reasonable to treat this man with radiation therapy. I do not think he has anything to lose and hypernephromas do respond to radiation.

*FINAL DIGANOSIS*: Hypernephroma of the right kidney with metastasis to the bladder.

*TUMOR BOARD RECOMMENDATION*: Radiation therapy to the residual bladder lesion to a total dose of 6,000 rads.

#### CASE No. 10: Malignant Melanoma Involving the Urethra

*PRESENTATION*: The patient is a 66-year-old white female, who first noted some vaginal bleeding and pain in July, 1964. In August, 1964, a cystic lesion was removed from the vagina, but recurred four months later, and in January, 1965, a mass approximately 1 x 1.5 cm was removed from the vagina. This was reported to be a malignant melanoma. The patient was referred here at that time. Her work-up here included a chest x-ray and a bone survey, both of which were negative. However a lymphangiogram was suggestive of metastatic disease involving the right iliac lymph nodes. The patient was operated in February, 1965 and a tumor involving the right ovary was found and removed. A bilateral salpingo-oophorectomy and right iliac node dissection was carried out. The tumor of the right ovary appeared to be the same type of lesion as that removed from the vagina originally; however, the right iliac node dissection was negative for tumor cells. There were multiple nodules around the vagina and the vulva at that time. The patient had a radical vulvo-vaginectomy in October, 1965. Since that time she has done exceedingly well. Her case was followed in the Gynecology Tumor Clinic where



she expressed no problems or complaints. She was seen again some two weeks ago in the Gynecology Tumor Clinic with no complaints; however, at that time it was noted that she had a brownish discoloration near the lower part of the urethra. The patient was then admitted to the hospital for evaluation. Upon admission the history was as previously described.

Examination of the perineum revealed a well-healed scar from her previous surgery. On everting the urethral mucosa a brownish discoloration was noted. The patient then underwent cystoscopy and at that time this superficial brownish discoloration was found to involve the entire urethra and bladder neck; however, the bladder was felt to be free of disease. Further evaluation included an IVP, which was negative, a chest x-ray, which was normal, a normal CBC and normal values for alkaline phosphatase, SGOT, BSP, BUN and urinalysis. The lesion of the urethra was biopsied, and there seems to be some question as to what it shows.

DOCTOR BOTTOMLEY: Has she had a urine melanin performed?

PRESENTER: This has not been carried out.

DOCTOR McCLELLAN: The lesion removed from the vagina in 1965 was a malignant melanoma as was the ovarian lesion. The urethral biopsy obtained on this admission also revealed melanoma cells.

DOCTOR BOGARDUS: So basically we are dealing with recurrent malignant melanoma.

DOCTOR McCLELLAN: Or a patient who has a tendency to develop malignant melanomas, and she keeps developing new primaries.

DOCTOR MERRILL: This patient was presented to the Tumor Board three years ago. She was seen at that time for a different lesion, the metastatic lesion in her ovary; however, examination for melanin in her urine was negative. Also, at that time a liver scan was suggestive of metastatic disease, so she had a liver biopsy which was negative. Doctor Geyer, does this pigmented area go all the way up the urethra?

DOCTOR GEYER: Doctor Thompson did the cystoscopy.

DOCTOR THOMPSON: It extended all the way to and including the bladder neck.

DOCTOR BOTTOMLEY: What is the natural history of these lesions in terms of rapidity of growth? Do you know how long it takes before they ulcerate?

DOCTOR McCLELLAN: I think it just varies with the patient. Some take a very rapid course and some are prolonged like this.

DOCTOR SNOW: Usually the course with melanomas arising from the mucous membrane is relatively rapid. Survival for one or two years is about usual.

DOCTOR BOTTOMLEY: The clinical course of patients with malignant melanoma is frequently quite variable. You think of this tumor as being rapidly fatal, but occasionally a patient may have very bizarre regressions or responses to therapy, or localization of the tumor without widespread metastases. This patient's disease has progressed very slowly.

DOCTOR CHANES: A recent article reviewed some 630 patients with malignant melanoma, and measured the survival times. They arrived at the conclusion that this disease is not as malignant as people generally believe it to be. Superficial melanoma apparently has less tendency to metastasize and the evolution is slower than other types of melanoma. I do not know if superficial melanoma arising from the vaginal mucosa is comparable or not.

DOCTOR MERRILL: I think there have been six melanomas of the vagina reported in the world literature and to my knowledge this is the only superficial one of the vagina. The total number of melanomas in the vagina, as I say, is less than a half dozen. It is a very uncommon disease. Superficial melanoma is even more rare. I am unfamiliar with its having ever been reported. Invasive melanomas of the vagina have a very rapid course with survival of less than two years.

DOCTOR BOTTOMLEY: I wonder if Doctor Geyer would comment on the surgical procedure that would be involved.

DOCTOR GEYER: Surgically it would be necessary to remove the whole urethra and vesical neck, but it would also involve doing a cystectomy in order to remove all of the lymphatic drainage. She has had a lymph node dissection on the right side. I think that if she is going to have a cystourethrec-



tomy it would be worthwhile doing a lymph node dissection on the left side.

DOCTOR BOTTOMLEY: Would you do an ileal conduit?

DOCTOR GEYER: She would need a urinary diversion procedure such as bilateral uretero-ileostomy or bilateral ureterosigmoidostomy.

DOCTOR BOTTOMLEY: What about her supposed liver metastases? Was this investigated during this admission or is there any more information on this?

PRESENTER: She had a chemical evaluation of liver function. She has not yet had a liver scan. Her alkaline phosphatase, SGOT and BSP were all normal.

DOCTOR CHANES: Would you be inclined to be more aggressive in view of the pathological findings of this tumor?

DOCTOR GEYER: I think the variety of treatments for urethral carcinoma in female patients has been confusing in the past, and some people have tried simple resection of the lesion. Recent reviewers of the problem indicate the value of more radical surgery, doing a cystectomy and in this case a left iliac lymph node dissection since a right iliac node dissection was done earlier.

DOCTOR SNOW: Of some 180 melanomas of the mucous membrane of the upper respiratory tract, there are five survivors beyond five years who were free of the melanoma. A few others survive for as long as 12 years; with persistent tumor most are dead from melanoma within two years. One of the five long survivors had a melanoma of the palatine tonsil, which was treated with external radiation. The other four survivors were treated with either cold surgery or electrocoagulation. Would you consider radiation therapy of this patient?

DOCTOR BOGARDUS: I think that radiation therapy has something to offer in melanoma, but only as palliation. You remember about one to one and one-half years ago we had a patient with a malignant melanoma in the nasal cavity. She was having a lot of difficulty with bleeding and we treated her with radiation therapy. She had an excellent regression of her tumor; however, I am not sure what finally did happen to her.

DOCTOR SNOW: She died April 5th. The

tumor was reduced to about half the original size with radiation therapy and then was maintained at that same size with Methotrexate for about two months. Subsequently, the patient refused further Methotrexate and was treated another three months with Cytoxan with the tumor remaining the same size. The tumor began to increase in size in the fourth month of Cytoxan therapy. The melanoma that was cured in the tonsil by radiation therapy was thought to be at a relatively early stage, and why radiation was chosen as the treatment, I don't know.

DOCTOR BOGARDUS: I think it would be unusual to attempt to treat one of these primarily in a curative fashion with radiation therapy. I have treated a number of these patients who have refused surgery, and interestingly enough malignant melanoma is not as radio-resistant as one would be led to believe. Many times these tumors do respond. The case we mentioned is a case in point, but I still feel that if there is a surgical procedure that does offer a chance of cure this should be the way that she should be treated. Radiation therapy would be held as a secondary means of treatment.

DOCTOR BOTTOMLEY: How do patients of this age tolerate this operative procedure?

DOCTOR GEYER: The same procedure would be indicated for a patient with primary carcinoma of the bladder, which occurs in this age group and the operative mortality is in the range of five to ten percent.

DOCTOR BOGARDUS: Doctor Merrill, do you have any other thoughts?

DOCTOR MERRILL: I am not inclined to do this radical surgery because of the nature of her biological response to her tumor. The reason she had a vulvectomy and vaginectomy was because after six months of observation she had not died or grown worse, despite metastatic disease. We said "she is going to stay around and is getting healthier by the day, so we had better treat the rest of her lesion." We thought that since she had already demonstrated metastases that the prognosis was bad. Then we removed everything from her bladder down to her thighs including about two centimeters of her urethra, and she just got better and better. Now she is totally asymptomatic. Quite frankly, what I had in mind was some kind



of procedure such as vein stripping, which would strip out all the mucosa of the urethra and let it epithelialize down, but I have never heard of such a thing. It seemed like a pretty good idea. I'm serious. I'm not impressed with the biological aggressiveness of this particular tumor. Histologically, it is a limited superficial tumor.

DOCTOR CHANES: It seems to behave more or less like superficial melanoma of the skin.

DOCTOR GEYER: Well, with local excision or with radiation, it would still be necessary to provide for the urine. She would have to have some type of urinary diversion.

DOCTOR BOTTOMLEY: Have they ever tried vein grafts with this type of procedure?

DOCTOR GEYER: No. Adequate local excision would destroy the sphincter.

DOCTOR BOTTOMLEY: But you don't have a sphincter in the diversionary procedures either.

DOCTOR GEYER: No, but at least the patient can wear a collecting device and this keeps him dry and odorless.

PRESENTER: Why couldn't you just ex-

cise the urethra and do a suprapubic cystostomy instead of removing the bladder.

DOCTOR GEYER: Cystoscopy reveals tumor at the bladder neck. In addition to the urethra it would be necessary to remove the bladder neck, and the ureters are only a centimeter away. Also, there is lymphatic spread, which will involve the hypogastric and iliac lymph nodes.

DOCTOR MERRILL: I think that is about the only thing that can be done.

DOCTOR BOGARDUS: Doctor Merrill, I don't know whether this answers your questions or not, but this seems to be the general thought, that some surgical procedure should be advised; whether it is done in a stripping fashion or with a cystectomy is going to be up to the managing service at this point.

*FINAL DIAGNOSIS:* Malignant melanoma, superficial, recurrent involving the urethra.

*TUMOR BOARD RECOMMENDATION:* Surgical excision of the recurrent tumor, either by means of a local excision or a larger operation involving a cystectomy and left iliac node dissection. □

## FIFTEENTH ANNUAL MEETING

# OKLAHOMA ASSOCIATION OF HOUSE STAFF PHYSICIANS

May 23, 1969

## Auditorium, University of Oklahoma School of Medicine

Each year the Association of House Staff Physicians presents an Intern-Resident Day program to provide an opportunity to report on research within the hospitals and an introduction to the mechanisms of conducting a meeting as well as initial exposure to research done by house staff officers.

Prizes of \$100 each are offered for the best papers in the general area of medicine, surgery, surgical specialties, pediatrics, obstetrics and gynecology and radiology.

Guest speakers for this year's program will be:

**René Menguy, M.D.**, Professor and Head, Department of Surgery, University of Chicago—"The Gastric Mucosal Barrier"

**Ralph Williams, M.D.**, Professor and Head, Department of Medicine, University of New Mexico School of Medicine—"Benign Monoclonal Gammopathies"



# Books As Clinical Tools

## CLINICAL REFERENCES ON PEDIATRIC SURGERY

E. IDE SMITH, M.D.\*

With the development of pediatric surgery as a specialty branch of surgery, there has developed a growing number of textbooks, monographs, and periodicals in this field. The clinical usefulness of references in pediatric surgery has been limited by three factors: (1) The fact that most reports will be written either from a surgical (operative technique) standpoint or from a pediatric (general diagnosis and care) viewpoint, and will have been distributed between specialty journals of each field. (2) Because of the relative rarity of many conditions and the rapid evolution of the specialty, many clinical reports lack statistically significant background data. (3) Much remains unknown concerning the basic pathology and physiology throughout the field. For this reason a reference may be outdated in two to three years.

The most commonly employed reference at present is *Pediatric Surgery*,<sup>1</sup> a two-volume text edited by Benson, Mustard, Ravitch, Snyder, and Welch (1962). This work will be revised shortly. Sections are included on the surgical subspecialties in pediatrics. Doctor Robert E. Gross' *The Surgery of Infancy and Childhood*,<sup>2</sup> published in 1953, remains a definitive text particularly with regard to pathology, diagnosis, and in some areas of operative technique. Swenson's *Pediatric Surgery*,<sup>3</sup> has now gone through two editions and has a third two-volume edition in print. For initial reading concerning the diagnosis and recognition of various common problems such as inguinal hernia, appendicitis, and respiratory distress in the newborn, *The Surgeon and the Child*<sup>4</sup> by Willis Potts (1959) remains very readable and rewarding. The chapter, "The Deformed Child," is highly recommended to

any physician dealing with congenital abnormalities.

The *Surgery of Childhood*<sup>5</sup> edited by J. J. Bason Brown (1963) is the British multi-authored text of pediatric surgery. This book includes a large section on orthopedics in children in addition to the areas which would generally be considered within the field of general surgery. There is less detail concerning operative technique than in Benson, et al., Gross or Swenson. *The Essentials of Paediatric Surgery*<sup>6</sup> by Nixon and O'Donnell, and Dennison's *Surgery in Infancy and Childhood*<sup>7</sup> are shorter texts better suited for the student or physician seeking a briefer resume as well as for the nurse.

There are two atlases of pediatric surgical operative technique, *Atlas of Infant Surgery*,<sup>8</sup> by Lewis (1967) and the *Atlas of Pediatric Surgery*<sup>9</sup> by White (1965).

Two other specialized texts are those by Kiesewetter on preoperative and postoperative care in pediatric surgery, and by Redo on outpatient or minor pediatric surgery.

Starting in 1966 there has been a separate journal for pediatric surgery, *The Journal of Pediatric Surgery*, which also contains an *International Abstracts of Pediatric Surgery*. A special section on pediatric surgery is also a routine part of the monthly publication *Surgery*. The C. C. Thomas series of monographs have made several outstanding contributions to the literature of pediatric surgery, among these being Durham Smith's *Spina Bifida and the Total Care of Spinal Myelomeningomyelocele*<sup>10</sup> and Ravitch's *Intussusception in Infants and Children*.<sup>11</sup>

A good short summary of "Special Problems in Infants and Children" has been written by Kiesewetter for the *Manual of Preoperative and Postoperative Care*,<sup>12</sup> prepared by the American College of Surgeons. A very satisfactory nursing text, *Pediatric Surgery for Nurses*,<sup>13</sup> has been published recently by Raffensperger and Primrose (1968).

The *Yearbook of Pediatrics*<sup>14</sup> (edited by

\*Associate Professor of Surgery and Pediatrics; Chief, Division of Pediatric Surgery, Department of Pediatrics, University of Oklahoma Medical Center.

One of a series sponsored by the Department of Continuing Education.



Gellis) has consistently abstracted a significant number of papers of pediatric surgical interest from the pediatric journals. In addition, the editorial comments by the editor or invited consultants have been very interesting and entertaining and have given a good sense of proportion to the work which has been reported. □

REFERENCES

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6. Nixon, Harold Homewood, and O'Donnell, Barry: Essentials of Paediatric Surgery. Second Edition. Philadelphia, Lippincott, 1956. \$10.00.  
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9. White, Robert Raymond: Atlas of Pediatric Surgery. N.Y., McGraw, 1965. \$30.00.  
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12. American College of Surgeons: Manual of Preoperative and Postoperative Care. Philadelphia, Saunders, 1967. \$8.50.  
13. Raffensperger, John G. and Primrose, Rosellen Bohlen, ed.: Pediatric Surgery for Nurses. Boston, Little, Brown, 1968. \$9.50.  
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SIXTH OKLAHOMA COLLOQUY ON ADVANCES IN INTERNAL MEDICINE  
INTENSIVE CARE  
JUNE 13th-14th, 1969  
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## DENYER NAMES COUNCILS AND COMMITTEES

Hillard E. Denyer, M.D., President of the Oklahoma State Medical Association, has released a partial list of his appointments to the OSMA Councils and Committees. The com-

plete list will be published in a future issue of *The Journal*.

Standing committees and councils are established in the OSMA Bylaws, while special committees are desig-

nated by the President to carry out specific functions under the jurisdiction of appropriate councils.

Remaining appointments will be completed within two weeks, Doctor Denyer said.

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## Medical Assistants Announce Associate Arts Degree

The challenge of the American Association of Medical Assistants, Oklahoma State Chapter, "Professionalism Through Education," is becoming a reality. According to Mrs. Ann Strobbridge, Chairman of the Education Committee of the Oklahoma organization, an Associate Arts Degree in Medical Assisting will be offered by Sayre Junior College, Sayre; St. Gregory's College, Shawnee; and Connors State College in Warner, beginning in September, 1969.

In announcing the program, Mrs. Strobbridge explained, "Considering the varied duties that are daily functions of today's medical assistant, it is apparent that the movement to upgrade the profession, provide the means of getting the proper education for the profession and the certification for those who attain their goal, is long overdue. There is little time today for the physician to train his medical assistant in the multifaceted requirements of the job."

The two-year Junior College courses will consist of anatomy and physiology, medical terminology, medical law, ethics and economics, psychology, medical assistant administrative procedures, medical assis-

tant clinical procedures, laboratory orientation and externship.

The group is strongly urging the support of the Oklahoma State Medical Association and other allied organizations in the promotion of this program in encouraging high school graduates to consider this course. □

## Hospitals Now Have Lien Law

In its closing days the Oklahoma State Legislature passed many laws. Included among them was House Bill 1323, known as the hospital lien law, and authored by Representative D. D. Rayburne of Lawton.

The new law allows a hospital to file a lien against any monies that might be paid to a patient who was treated in a hospital. It imposes an obligation upon the party responsible for the patient's injuries, or the insurance carrier, to pay money to the hospital out of the funds due the patient in settlement.

In order to avail itself of this lien the hospital is required to provide a written notice containing an itemized statement of the amount of the claim and the name and address of the injured person, date of the accident and other pertinent information with the Office of the Clerk of the District Court for the county in which the hospital is located. The

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#### Prepaid Medical Care Committee

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 Emil E. Palik, M.D., Tulsa

filing of this lien will assure the hospital that its claim will be paid out of any judgment or settlement that is reached on behalf of the injured patient.

A hospital is also required to mail a copy of its information to the party responsible for the injury, to his insurance carrier if known, and to the patient.

The State Senate passed the bill on April 14th and on April 15th it was sent to the Governor's desk for his signature. □

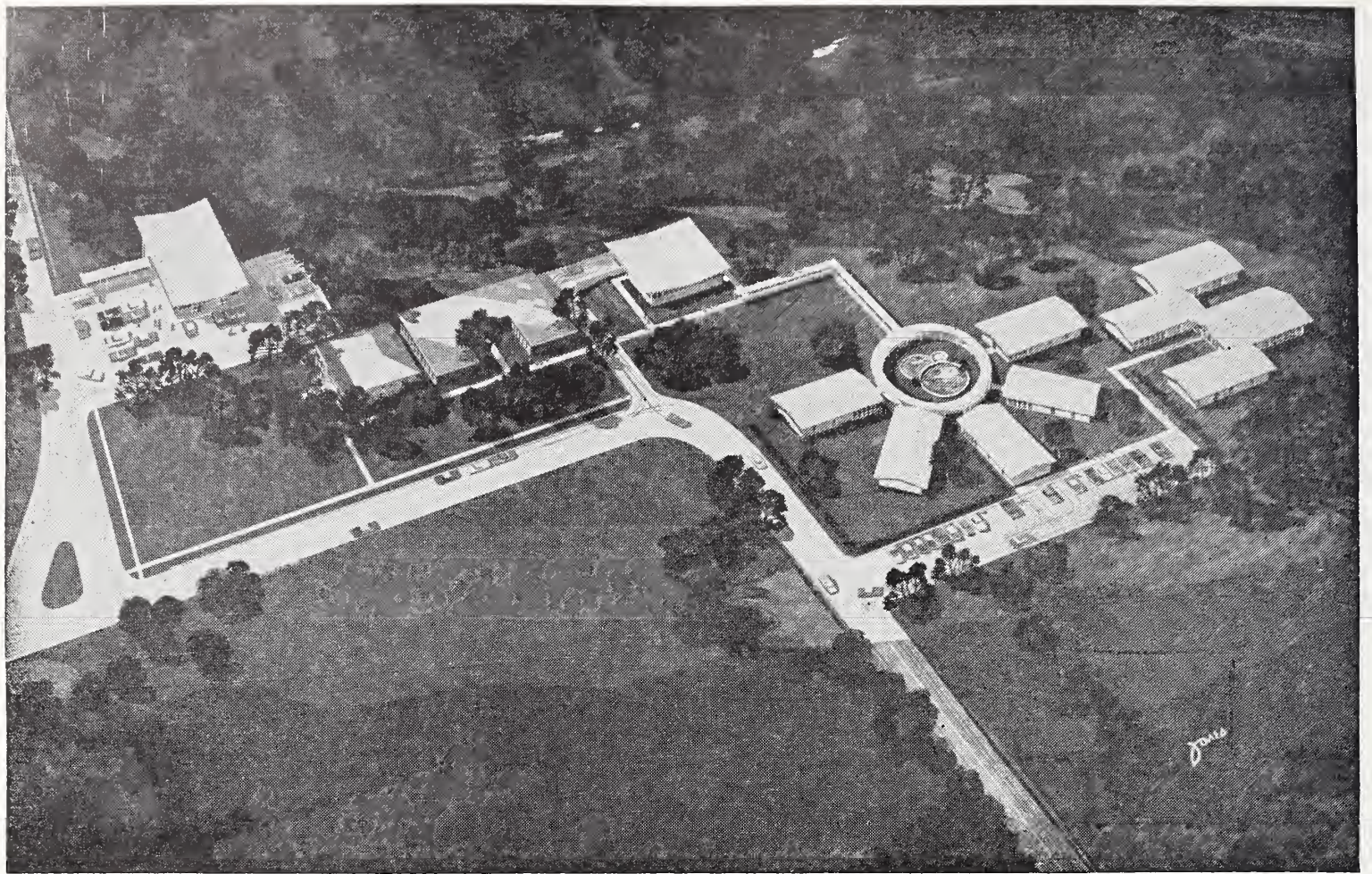
## Lynn Named Chairman of Medical School Department

Thomas N. Lynn, M.D., professor of preventive medicine and public health and associate professor of medicine, has assumed duties as chairman of the Department of Preventive Medicine and Public Health at the University of Oklahoma School of Medicine.

He was also appointed chairman of the preventive medicine-public health department in the new OU School of Health.

In both positions, Doctor Lynn succeeds William W. Schottstaedt, M.D., now dean of the OU School of Health and administrative head of the School of Health Related Professions, presently being developed at the OU Medical Center. □





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## Dean Named For OU Dental School

Doctor William E. Brown, a national leader in the profession of dentistry who has been a member of the University of Michigan faculty since 1945, will direct the development of the new School of Dentistry at the University of Oklahoma Medical Center in Oklahoma City.

Doctor Brown, 46, is acting chairman of the Department of Pedodontics and associate director for graduate and postgraduate dentistry in the W. K. Kellogg Foundation Institute at the University of Michigan. His appointment as dean of the OU School of Dentistry will become effective July 1st, 1969, it was announced recently when the OU Board of Regents met in Norman.

"We are extremely fortunate to secure the services of Doctor Brown," said OU President J. Herbert Hollomon. "He is a leader in the field of dental education and is highly respected by his professional colleagues throughout the United States. His vitality and vision will prove great assets as we develop Oklahoma's first school for the professional education of dentists."

Establishment of the school was urged for many years by the Oklahoma State Regents for Higher Education, the Oklahoma Legislature, the OU administration and practic-

ing dentists throughout the state, because many Oklahomans who attended dental schools elsewhere did not return to the state.

In 1967, the state regents allocated \$50,000 to the Medical Center for preliminary planning for the dental school building, and the proposed facility is one of the priority items to be financed by the capital improvements bond issue which Oklahomans approved last December.

Born August 29th, 1922, at Benton Harbour, Michigan, Doctor Brown received the degree of doctor of dental surgery in 1945 and the degree of master of science in dentistry for children in 1947 from the University of Michigan.

He is the author of 75 articles that have been published in professional journals, has served as editor of the University of Michigan Dental Alumni Bulletin.

He has held many offices from secretary-treasurer to president in a number of professional groups. He was president of the Michigan Society of Dentistry for Children in 1954, Washtenaw County Dental Society in 1952, American Academy of Pedodontics in 1963-64 and American Society of Dentistry for Children in 1959. He is president of the Michigan State Dental Association, was a member of the American Dental Association task force on the development of a national children's dental health program in 1966 and has served as a consultant to the American Dental Association's Council on Dental Education since 1967.

A diplomate of the American Board of Pedodontics, the Michigan professor is a member and former chairman of the organization's examining board.

Since 1965 he has served the U.S. Public Health Service as a consultant on continuing education. He has been a regent of the American College of Dentists since 1966.

At the University of Michigan he has been chairman of the Graduate Studies Committee since 1962 and director of the Dental Assistant Utilization Training Program since 1961. □

## First Nicholson Memorial Lectureship Presented

Doctor Robert A. Aldrich, professor of pediatrics and head of the Division of Human Ecology at the University of Washington School of Medicine, Seattle, gave the first Ben H. Nicholson Memorial Lecture, Thursday, May 8th, at the University of Oklahoma Medical Center.

The lectureship was established in memory of the late Doctor Nicholson, former Editor-in-Chief of *The Journal of the Oklahoma State Medical Association*. He was a practicing pediatrician in Oklahoma City and a long-time member of the Medical Center faculty, who died September 25th, 1968.

Memorial contributions from Doctor Nicholson's colleagues, friends, and patients and their families were used to create the lectureship, sponsored by the Department of Pediatrics and the Office of Postgraduate Education.

Each year an eminent pediatrician will be brought here to present the lecture.

Doctor Aldrich spoke on "Today's Youth and Public Policies on Health" at 4:00 p.m. in the Medical School Auditorium. All physicians and other interested persons were invited.

A member of the Washington faculty since 1956, Doctor Aldrich took a leave of absence in 1963-64 to serve as director of the National Institute of Child Health and Human Development, Bethesda, Maryland.

Upon returning to Seattle, he became head of the human ecology program, which is concerned with the relationship of disease in children to their environment.

He is a member of the President's Committee on Mental Retardation and past-chairman of the Washington Governor's Advisory Council on Mental Health and Retardation.

Doctor Aldrich was graduated from Northwestern University Medical School with highest distinction. He took his specialty training at the University of Minnesota Hospitals and subsequently was a consultant in pediatrics at the Mayo Clinic and an instructor at the Minnesota graduate school. □



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## Interesting Program Planned For AMA Convention

An abundance of valuable information will be presented in a variety of interesting ways to those attending the American Medical Association's 1969 Annual Convention in New York City.

Some information will be available to visitors in the comfort of their convention hotels or motels. This will be through the special televising of convention news, interviews, panels, and scientific presentations.

Such TV programming, a highlight of AMA Annual and Clinical Conventions in recent years, will be available from 5 p.m. to midnight Sunday, July 13th; from 7 a.m. to 9 a.m. and from 5 p.m. to midnight Monday through Wednesday, July 14th through 16th; and from 7 a.m. to 9 a.m. Thursday, July 17th.

Much of the scientific activity of the July 13th through 17th Annual Convention will be in the Coliseum and New York Hilton Hotel. The House of Delegates will meet at the Americana Hotel.

In addition to papers and lectures which will be presented in the Coliseum and New York Hilton, there

will be exhibits, color closed circuit television, and medical motion pictures.

Some 250 to 300 scientific exhibits are expected at the Coliseum, including special ones on arthritis, pulmonary function, fresh tissue pathology, fractures, resuscitation, and laboratory medicine.

A total of 23 scientific section programs will be presented through lectures and discussions with some of the nation's medical authorities. In addition, four general scientific meetings will be held on chronic pulmonary insufficiency and problems of air pollution, human sexuality, impact of medical education on patient care, and physical fitness and aging. These meetings will be of interest to all physicians in attendance.

From rooms set aside at the Coliseum, viewers will be able to see closed circuit scientific presentations televised in color from Cornell University Medical Center.

The Coliseum also will be the site of medical film showings, including the premiere showing of some new films. □

## Emergency Physicians Organization Formed

The increasing patient loads in emergency departments across the country has underscored the need for a new type of physician—a specialist in emergencies — the emergency physician.

To assist this new category of physicians the American College of Emergency Physicians was organized in August, 1968. One member of the board of the new organization is well known to Oklahoma physicians, he is R. R. Hannas, M.D., formerly in practice in Sentinel, Oklahoma.

A nucleus of physicians—both from full time and part time emergency care groups in Michigan—chartered the American College of Emergency Physicians and have organized the college on a nationwide basis.

At a meeting in Chicago on February 7th and 8th, further steps were taken to widen the scope of the new specialty group. Represen-

tatives from 19 states were present to help plan the future of the college.

One of the main purposes of the college is to improve emergency services rendered to the patient. Other aims of the college are: to encourage and implement the training and continuing education of emergency physicians; to promote policy which preserves the integrity of private practice; to promote coordination of community emergency care facilities and personnel; and to advance the ethical standards of the private practice of emergency medicine and surgery.

As in all new organizations, the first order of business of the college will be a membership drive. Physicians who are working full time or part time in emergency departments and who are interested in joining the organization should contact Harris B. Graves, M.D., Nebraska Methodist Hospital, 8301 Dodge Street, Omaha, Nebraska 68114. □

## Robert H. Bayley Symposium Planned For June

Although friends and associates were shocked by the death of Robert H. Bayley, M.D., on April 11th, 1969, The Robert H. Bayley Symposium, which had already been scheduled and announced, will be held in his honor on June 6th and 7th. The two-day meeting was originally planned to commemorate Doctor Bayley's 25th year of service to the medical center.

Doctor Bayley was the George L. Cross Professor of Research Medicine at the University of Oklahoma Medical Center. In the past he had been Director of the Heart Station and Professor of Medicine at the University of Oklahoma School of Medicine and was recognized internationally for his contributions to electrophysiology and electrocardiography. He was the author of "Biophysical Principles of Electrocardiography" and was a member of the Oklahoma Hall of Fame.

The Office of Postgraduate Education and the Department of Medicine of the Medical Center and the Oklahoma Heart Association are sponsoring the symposium.

This first lectureship will be presented by George E. Burch, M.D., Professor of Medicine, Tulane University. Other participants on the program will be: J. A. Abildshov, M.D., Professor of Medicine, University of Utah College of Medicine; T. E. Cuddy, M.D., Associate Professor of Medicine, University of Manitoba, John S. La Due, M.D., Associate Professor of Clinical Medicine, Cornell University; Ernest W. Reynolds, Jr., M.D., Professor of Internal Medicine, University of Michigan Medical School and E. Harvey Estes, Jr., M.D., Professor of Medicine, Duke University.

The program will be presented at the Faculty House, 601 N.E. 14th Street, Oklahoma City. Further information may be obtained from any of the sponsors. □



## DEATHS

HAROLD B. WITTEN, M.D.  
1907-1969

Harold B. Witten, M.D., 61, superintendent of the Western State Hospital, Fort Supply, died in Oklahoma City, March 19th, 1969.

A native of Gotebo, Oklahoma, Doctor Witten was a 1936 graduate of the University of Oklahoma School of Medicine. He had served as superintendent of Central State Hospital, Norman, and the Veterans Administration Hospital, Little Rock, Arkansas, before moving to Fort Supply in 1960.

Certified by the American Board of Psychiatry, Doctor Witten was a former Instructor in the Department of Psychiatry and Neurology at the O.U. School of Medicine.

WANN LANGSTON, M.D.  
1882-1969

Wann Langston, M.D., Oklahoma City physician who retired last year, died March 22nd, 1969.

Born in Francisco, Alabama in 1882, Doctor Lingston graduated from the University of Oklahoma School of Medicine in 1916, where he later became Professor of Internal Medicine. He also served as dean of the school in 1945

Doctor Langston was a Life Member of the Oklahoma State Medical Association; had served as governor of the American College of Physicians; and at one time was superintendent of the University Hospital in Oklahoma City. Certified by the American Board of Internal Medicine, Doctor Langston was a Fellow of the American College of Physicians.

CARL T. STEEN, M.D.  
1882-1969

A retired, Norman physician, Carl T. Steen, M.D., died in Sulphur, Oklahoma, February 3rd, 1969. Born in Hamilton, Texas, he graduated from the University of Oklahoma School of Medicine in 1914. Doctor Steen specialized in psychiatry and following a few years of practice in Duncan, Oklahoma, and Burkburnett, Texas, he moved to Norman where he remained until his retirement in 1961.

Doctor Steen was a member of the American Psychiatric Association. In 1965, the OSMA presented Doctor Steen with a Fifty-Year Pin in recognition of his service to his profession.

JOSEPH H. GEYER, M.D.  
1911-1969

Joseph H. Geyer, M.D., 57-year-old Mooreland physician, died February 23rd, 1969.

Doctor Geyer was born in Wellsville, Ohio in 1911 and graduated from the Ohio State University College of Medicine in 1943. Following his practice in New Albany, Indiana, Doctor Geyer moved to Mooreland two years ago.

He was a Fellow of the American College of Chest Physicians and a Diplomat of the American Board of Internal Medicine.

JAMES P. VANSANT, M.D.  
1889-1969

A pioneer, Dewey physician, James P. Vansant, M.D., died in Clearwater, Florida, April 16th, 1969.

Doctor Vansant was a 1915 graduate of Emory University School of Medicine and had practiced in Piedmont, Alabama and Woodstock, Georgia before establishing his practice in Dewey.

A past-president of the Washington-Nowata County Medical Society, he had been honored by the Oklahoma State Medical Association in 1965 with the presentation of an Honorary-Life Membership for his dedication to his profession and humanity. □

## BOOK REVIEWS

**INTERNAL MEDICINE BASED ON MECHANISMS OF DISEASE.** Edited by Peter J. Talso and Alexander P. Remenchick. Saint Louis: The C. V. Mosby Company, 1968.

There are 31 contributors to this volume. The book contains 797 pages including the index. The illustrations are of high quality including diagrams and the reproduction of roentgenograms.

The editors of this text take as a basic premise that "conventional textbooks" of medicine have grown to such size that they are impractical to handle. In addition the editors believe that conventional texts serve only a limited function, that of reference sources for students and practitioners. They have set out to establish a "working textbook" presumably with the medical student in mind, providing him with the fundamental principles of disease. One of the three prerequisites laid down for a book of this sort in the preface is that it must be of a size convenient to the student so that he can carry it with him. This aim has of course led the editors to attempt to condense and streamline an enormous amount of information, with the resultant shortcomings of such a condensation. One cannot complain however about the choice of topics, because the book does a creditable job of covering the field of medicine.

Unfortunately the need for streamlining has led the authors to oversimplification and statements of questionable usefulness such as the second sentence of the introduction which states, "The characteristics of each individual are determined by his genetic inheritance." Don't all medical school applicants in 1968 know this already? Again on page 644 is the statement: "Hematology concerns itself mainly with diseases involving the cellular elements of the blood." These little gratuities are found throughout the book and, frankly, become rather irritating. Fortunately, several of the chapters are relatively free of this kind of information and present complex information in a very readable and lucid style. However, information



such as the five helpful steps in the diagnosis of cancer listed on page 165 make one wonder whether some of the chapters actually might have been written from lecture notes. In some instances, misleading information is given; for example, the listing that histologic examination of tissue is a helpful step in the diagnosis of cancer. This examination should not be thought of as only another helpful step but an essential part of the diagnosis of cancer.

This book suffers more than usual from the inevitable unevenness which arises from multiple authorship. The sections on the cardiovascular system and the one on endocrine abnormalities are exceptionally good and are studied with pleasure and profit. On the other hand the section on infectious diseases contains serious errors such as the suggestion that tetracycline is an adequate substitute for penicillin in the treatment of pneumococcal pneumonia. This recommendation must be taken with considerable caution in view of the reports of tetracycline resistance of this organism. The author also suggests that for staphylococcal disease of moderate severity, where the organism is resistant to penicillin, erythromycin or tetracycline are suitable alternatives. This hardly seems reasonable in the age of semisynthetic penicillins. The discussion of primary atypical pneumonia is particularly disorganized. One would hope that an up to date text would discard this useless term. Perhaps it is only carelessness that permits a statement such as that on page 387: "Since fewer than one-half the viral pneumonias are caused by Mycoplasma and the other agents previously discussed, there remains a host of cases due to other viruses." Such an implication that Mycoplasma and Bedsonia are viruses is a serious error, and is inexcusable.

Publication of this book does bring up an interesting point. For some time it has been my conclusion that a course in medicine could profitably be taught in undergraduate college, at least for premedical students. Most medical schools have realized that an introduction to medicine is

often postponed too long after entering medical school already and are undertaking to remedy the situation. A semester course in college dealing with mechanisms of disease would have some merit. This would be the text for such a course.—*Everett R. Rhodes, M.D.*

#### **THE LUNG AND ITS DISORDERS IN THE NEWBORN INFANT.**

By Mary Ellen Avery, A.B., M.D., Eudowood Associate Professor of Pulmonary Diseases in Children, Johns Hopkins University School of Medicine. Second edition. Volume I in the series, "Major Problems in Clinical Pediatrics." Cloth, 285 pp. Philadelphia, London, Toronto: W. B. Saunders Company, 1968.

This book first appeared in 1964 as the first of a series of monographs dealing with major problems in clinical pediatrics. It was immediately well received with world-wide appeal resulting in its eventual translation into several languages. Avery has now incorporated in the revision new material which enhances the value of this monograph.

The format is essentially the same as the previous edition and consists of three major sections of approximately equal lengths entitled, "Normal Development in Physiology of the Fetal and Neonatal Lung," "Disorders of Respiration in the Newborn Period," and "Artificial Respiration." The first section has been extensively reworked with the addition of several new figures and the inclusion of new information on the cellular development of the lung and on the perinatal circulation. The section entitled "The Roentgenographic Evaluation of the Chest" has been completely revised by John P. Dorst and now includes a discussion of techniques and pitfalls. In the second section, masses in the mediastinum, transient tachypnea of the newborn, and a new section relating to persistent pulmonary dysfunction in premature infants have been added. The chapter on hyaline membrane disease is outstanding and detailed in its presentation. It allows for easy and interesting read-

ing with past and current concepts of this disease entity. There have been few changes in the final section with the exception of the addition of a brief discussion on the correction of metabolic acidosis and the use of hyperbaric oxygen.

There is careful documentation throughout the text and 773 references were included, 218 of which have been added since the first edition. The same style in clarity and presentation of the first edition has continued, but attention has been given to improving photomicrographs and charts in order to convey greater clarity about a particular problem.

This monograph is highly recommended to all who deal with the newborn, especially the pediatrician. Both the clinician and the investigator will find it invaluable.—*H. D. Riley, Jr., M.D.*

#### **HEART DISEASE IN INFANTS, CHILDREN AND ADOLESCENTS.**

Edited by A. J. Moss and F. H. Adams. 1,040 pp. Baltimore: Williams and Wilkins Company, 1963. \$48.50.

The editors of this book have produced a comprehensive volume on pediatric cardiology with chapters contributed by over 75 authors who are well known in this field. The continuous broadening of the horizons of pediatric cardiology makes the subject too large for any one person to become and remain competent and authoritative in all of the modalities. Although the book does contain certain new and previously unpublished data, its greatest merit is that it is a well organized and well referenced volume which covers all aspects of cardiology in infants, children, and adolescents. The book is broadly divided into six major parts plus an appendix.

The first part covers introductory subjects such as incidence, etiology, genetics, embryology and physiologic circulatory variations in the newborn period. The second and largest part is devoted to congenital cardiac defects. The next two parts are concerned with infectious, metabolic and connective tissue diseases which af-



fect the cardiovascular system. This is followed by a section on special problems with chapters on such subjects as hypertension and congestive heart failure. The last section deals with surgical considerations in pediatric cardiology and discusses postoperative syndromes.

The references for each chapter are excellent and the illustrations are of good technical quality.

Although the weight of the text (more than 5.5 pounds) and its cost (\$48.50) are high, the book is to be highly recommended for all physicians interested in the cardiovascular system of children.—*H. D. Riley, Jr., M.D.*

**WATER AND ELECTROLYTE METABOLISM AND ACID BASE BALANCE.** By Edward Muntwyler, Ph. D., Professor and Chairman, Department of Biochemistry, State University of New York, Downstate Medical Center, Brooklyn, New York. First edition, paper, 169 pp., with 33 figures. St. Louis: The C. V. Mosby Company. 1968. \$5.85.

This monograph is another contribution to a field of study which students and physicians often find difficult to comprehend. Nevertheless, this is subject matter which demands constant revision and clarification by investigators and continuous study by students at all levels. This author has done an excellent job of meeting these needs by presenting this complex subject material in a readable monograph.

The book is divided into three sections. The first deals with water and electrolyte metabolism. This section covers solute concentrations, body fluid compartments, renal function, and all the factors contributing to total body water exchange. There is a particularly good review of the current concept of ADH functions. Each major topic of a section is divided into sub-topics and these are presented in such a way that the discussion of one such sub-topic automatically leads to the next. Indeed, all of section I is a prerequisite for following sections.

Section II deals with the various factors involved in the maintenance of a constant hydrogen ion balance. These factors and how they relate to metabolic and respiratory acidosis and alkalosis are then applied at the end of the section to specific common clinical situations.

The last section provides a general discussion of the approaches to correction of disturbances of fluid, electrolytes, and acid-base balance. The author in particular emphasized certain pitfalls which may be encountered in the routine management of patients with such problems.

There are ample graphs and figures throughout this monograph to illustrate the various concepts. The bibliography is extensive and current.

Anyone interested in a comprehensive yet simplified discussion of this subject will find this monograph useful.—*John Stuemky, M.D.*

**PEDIATRIC THERAPY.** Harry C. Shirkey, editor. Third edition, 89 contributors. 1,258 pages, 351 illustrations. Saint Louis: The C. V. Mosby Company, 1968. \$25.00.

This is the only book available which is directed at the special problems involved in therapy of infants and children. The appearance of the third edition in such a short time speaks to its usefulness. The basic purpose of this compendium is to describe contemporary treatment methods in general pediatrics and in the major pediatric specialty areas. It is an encyclopedic work which includes not only the fundamentals of drug treatment and of supportive therapy in infants and children, but also management of symptoms, adverse drug reactions and other fundamental topics, all with a pediatric orientation. In addition to covering specific treatment of disorders by organ systems, it also contains excellent chapters on the management of problems peculiar to the newborn infant and treatment of pediatric surgical problems. There are very usable tables of common poisonings and of drug dosages in infants and children—truly

a pediatric pharmacopoeia. Each of these sections is printed on tinted paper for ready reference. This edition contains 351 superbly reproduced, pertinent illustrations, most of which come from the editor's extensive personal collection. Indexing and cross-indexing are excellent and facilitate quick reference.

The third edition of *Pediatric Therapy* maintains the high standards of the first editions. It provides answers to many therapeutic problems encountered with infants and children. Medical students, house officers, pediatricians, and other physicians dealing with children will find this book indispensable.—*H. D. Riley, Jr., M.D.*

**THE GAMMA GLOBULINS.** By Charles A. Janeway, M.D., Fred S. Rosen, M.D., Exio Merler, Ph.D., and Chester A. Alper, M.D., all of Harvard Medical School, Boston. 148 pp. Boston: Little, Brown and Company, 1967. \$6.75.

This compact 148 page book deals with a timely subject. It represents one of the Medical Progress Series from the *New England Journal of Medicine*. As stated in the preface, the authors, in preparing this review, intended to bring together the diverse elements that have constituted the rapid progress in understanding gamma globulins and the disorders of gamma globulin synthesis. The authors have succeeded in this task. The book is succinctly written, not overburdened with detail and provides a comprehensive review of this burgeoning field. It is also an excellent and authoritative reference volume containing 460 citations. Because this field has expanded and developed so rapidly and has been the subject of considerable research effort, any book published on the subject is somewhat out of date at the time of its publication. The authors are aware of this and have made every effort to make it as current as possible.

This small book is highly recommended as a reference on this subject.—*H. D. Riley, Jr., M.D.* □



## Miscellaneous Advertisements

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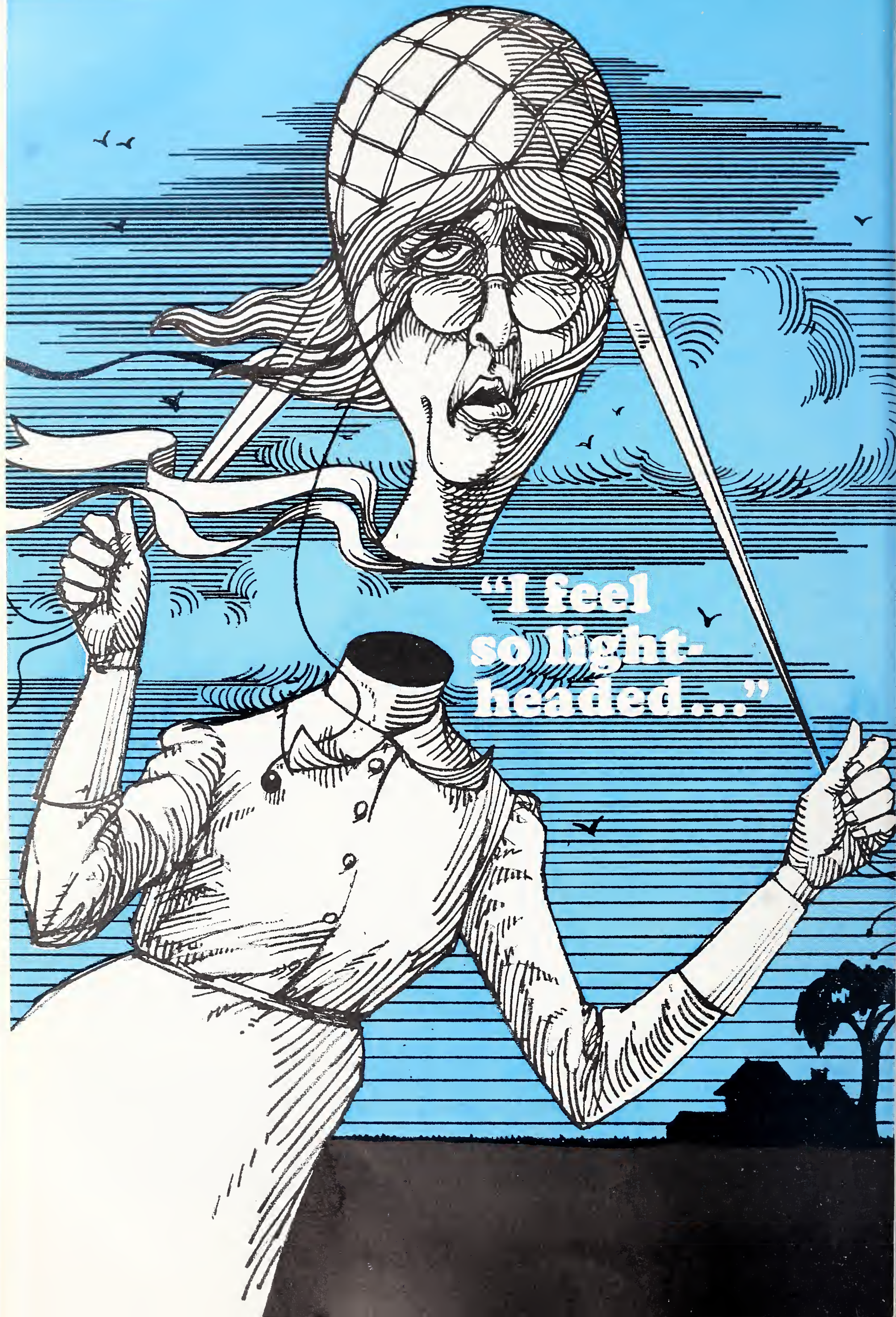
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The

JOURNAL

JUNE  
1969  
Vol. 62, No. 6

of the Oklahoma State Medical Association

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## *Workmen's Compensation: A Rare Opportunity*

**BETWEEN THE** 1968 and 1969 sessions of the Oklahoma Legislature an interim committee was appointed to study Workmen's Compensation and the operations of the State Industrial Court. During this investigation, the medical profession was severely criticized from several different sources.

The criticism ranged from the lack of interest on the part of the physicians in the equitable operation of the court to favoritism by physicians toward the side they were testifying for. A plaintiff's attorney organization charged that physicians were only representing insurance companies and that competent witnesses to testify for the plaintiff were difficult to find. Insurance company representatives said that physicians testifying for the plaintiffs were overstating the medical facts and creating higher awards to injured workmen.

Judges from the Industrial Court complained that their big problem was divergence in medical testimony. Disability differences between medical witnesses would range as high as 50 to 60 percent.

In light of this criticism, the OSMA Occupational Medicine Committee sought to work with the State Industrial Court to create a review mechanism that would make expert and nonbiased medical testimony available to the court. A bill was introduced in the 1969 Legislature to create a medical review panel to be used by the State Industrial Court to review Workmen's Compensation cases where there was a divergence of medical testimony as to the amount of disability.

The panel was to consist of a minimum of 40 physician-members representing the American Academy of General Practice, 12 orthopedic surgeons and three members each from the medical specialty fields recognized

by the OSMA. Judges of the court could refer cases to individual members of the panel for review. This would consist of reviewing the medical testimony given during the trial and, if necessary, a complete physical examination of the plaintiff workman. A report would then be submitted to the court for its use in arriving at a final judgment.

When introduced, the bill was met with vocal opposition and was tabled for consideration during the 1970 Legislative Session. However, Governor Dewey Bartlett saw the need for such a review mechanism and persuaded the Industrial Court to enter into a voluntary agreement with the OSMA to establish such a panel immediately. The Industrial Court agreed and the Occupational Medicine Committee of the OSMA is in the process of locating qualified physician experts to serve on the panel.

The voluntary creation of the panel offers a rare opportunity to the medical profession in Oklahoma to exert its influence in correcting the abuses and objections in the current method of handling workmen's compensation cases before the State Industrial Court. However, since the panel is being created by agreement between the Court and the OSMA, it will work only if physicians volunteer to serve on it.

When a physician is asked to review a case, he will be paid his standard fee for the service. The review will often require that he be willing to appear in court and offer his impartial medical testimony and that he submit prompt written reports upon completion of the examination of the injured workman. It will take time and effort on the part of the member-physicians to make the panel productive and worthwhile. However, if it works on a voluntary basis, the legislature will be more inclined to set it up on a statutory basis.

Medicine has been repeatedly criticized for its lack of interest in such projects. Now is the time for you, as a physician, to



help your profession offset such criticism. If you are approached by your medical specialty group and asked to serve on the panel, please indicate your support of this program by agreeing to serve.

Physicians interested in volunteering for

the panel and who have not already done so are requested to fill out the form at the bottom of this page and return it to the Occupational Medicine Committee in care of the OSMA in Oklahoma City.—James P. Bell, M.D. ☐

TO: Chairman, Occupational Medicine Committee

Oklahoma State Medical Association  
P.O. Box 18696  
Oklahoma City, Oklahoma 73118

Please include my name on the list of physicians willing to serve for brief periods of time on a voluntary panel sponsored by the OSMA to aid in providing impartial medical testimony to the State Industrial Court when requested by any of its judges.

I expect to be paid my standard fee for service for this testimony and will submit prompt written reports upon completion of examination of the plaintiff workman. I will expect to be provided special information by the Occupational Medicine Committee of the OSMA as to procedure once I am named to this committee.

\_\_\_\_\_  
Name of physician

\_\_\_\_\_  
Date

Family Physician\_\_\_\_\_

General Surgeon\_\_\_\_\_

Internist\_\_\_\_\_

Thoracic Surgeon\_\_\_\_\_

Dermatologist\_\_\_\_\_

Urological Surgeon\_\_\_\_\_

Neurologist\_\_\_\_\_

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Industrial Medicine\_\_\_\_\_

Psychiatry\_\_\_\_\_

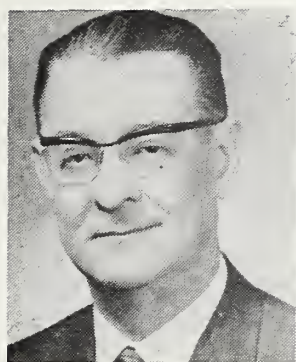
Traumatic Surgeon\_\_\_\_\_

Other\_\_\_\_\_

Orthopedic Surgeon\_\_\_\_\_

(Please check box for appropriate specialty.)





When the social planners succeeded in obtaining the passage of the Medicaid and Medicare laws it represented the culmination of years of concentrated effort. Organized medicine had pointed out that these programs were largely

motivated to control the conduct and manner of medical and hospital practice rather than to finance and improve the health care of the aged and poor. However, the concept of government help for indigents (Medicaid) was generally approved by the profession.

In addition, it was predicted that the guarantee to furnish a service instead of the money with which to purchase that service would result in spiralling health costs to all segments of the population. More was promised than available money and manpower could provide. Little or no financial deterrent to over-utilization by these beneficiaries was included. In fact, abrogation of the responsibility of children for parents and parents for children was encouraged.

In face of the predicted overwhelming rise in cost of services, which an otherwise responsible government had volunteered to assume, its officials refused to withdraw promises of too much for too many. Instead, they

underfunded both programs and then cast about for a scapegoat. Symptoms of these convulsive disorders appeared in earnest recently when the Senate Finance Committee launched an investigation of "abuses" of the Medicaid program. No dishonesty has been proven, only over-utilization has been alleged, and the implication is that over-utilization is under the control of the physician. Nothing could be further from the truth. In the relative absence of a financial deterrent, many patients beat a steady path to the doctor's office, and if he is wise he will have to examine them.

At the same time that these developments appeared on Capitol Hill, the now Secretary of HEW, appointed an *ad hoc* committee to consider a "fixed" fee schedule to be paid physicians for Medicaid patients. Since this committee is known to be comprised of persons advocating fixed fee schedules, you as a provider of health care will be forced to subsidize the program.

As you know, this arrangement is not presently acceptable to our own association. Government third party payers are expected to follow the UCR concept, aided and protected by the peer review mechanism.

Each component society and each individual physician needs to thoroughly study the various aspects of this problem. Your Delegates will need your counsel and support when called upon to decide our position. □

Sincerely yours,

*Harold E. Denyer*



# The Prevalence of Sulfadiazine Resistant Meningococci in Oklahoma, 1968

L. A. CHITWOOD, Ph.D.

*A closer look at the mysteries  
surrounding the treatment and  
prevention of meningococci  
meningitis; Oklahoma, 1968.*

BEGINNING LATE in December, 1967, and continuing through the winter months of 1968, an outbreak of *Neisseria meningitidis* infections occurred in the State of Oklahoma. Recent reports from the west coast<sup>1, 6</sup> have indicated that many strains of meningococci isolated from that area were resistant to sulfadiazine *in vitro* and the traditional prophylactic sulfadiazine failed to control the epidemics.

The following studies in conjunction with the State Department of Health were instituted to determine the incidence of sulfadiazine-resistant meningococci producing meningitis in civilian patients in Oklahoma and to compare *in vitro* susceptibilities of isolates to cephalothin, ampicillin, erythromycin, penicillin G and chloramphenicol.

## MATERIALS AND METHODS

During the period from December 29,

From the Department of Pediatrics, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma 73104.

1967, to February 3, 1968, 28 cases of meningococcal meningitis were reported to the Oklahoma State Department of Health. From these patients, 18 isolates were obtained for investigational laboratory studies.

Strains obtained from the State Department of Health and the Children's Memorial Hospital were initially examined for purity, colonial and microscopic appearance, oxidase and sugar fermentation reactions. Typing of the strains was determined by the macroscopic slide agglutination test with antisera obtained from the National Communicable Disease Center, Atlanta, Georgia.

## SULFADIAZINE SUSCEPTIBILITY TESTS

Concentrations of 20, 10, 5, 2, 1, 0.5, 0.1 and 0 mg percent sulfadiazine were incorporated into Mueller-Hinton agar plates. Each plate was inoculated with one loopful of an 18 hour Mueller-Hinton broth culture of the *Neisseria meningitidis*. After 18 hours' incubation at 37° C in ten percent carbon dioxide (CO<sub>2</sub>), sensitivity to sulfadiazine was determined as the lowest concentration which inhibited visible growth on the plate.

## ANTIBIOTIC SUSCEPTIBILITY TESTS

The minimum inhibitory concentration (MIC) was determined for cephalothin, ampicillin, erythromycin, penicillin G, and chloramphenicol, using standard two-fold



Table 1.  
SUSCEPTIBILITY OF NEISSERIA MENINGITIDIS ISOLATES TO SULFADIAZINE

Sero-groups	Number Examined	Minimum Inhibitory Concentration*						
		0.1	0.5	1.0	2.0	5.0	10	20
B	11	4		1	2	2	1	1
C	7			1	1	1	3	1
Percent of strains examined		22		11	16.5	16.5	22	11

\*Expressed as mg percent Mueller-Hinton agar.

dilutions of antibiotics in 0.5 ml Mueller-Hinton broth with 0.5 ml of an 18 hour broth culture diluted 10<sup>-3</sup> for the inoculum. Ater 18 hours' incubation under ten percent CO<sub>2</sub>, the last tube exhibiting no visible growth was considered the MIC for the antibiotic.

RESULTS

As noted in Table 1, 18 isolates . . . 11 serogroup B and seven serogroup C . . . were examined for *in vitro* susceptibility to sulfadiazine. Using the criteria of  $\leq 0.5$  mg percent as sensitive, 1.2, or five mg percent as intermediate, and  $>10$  mg percent as resistant,<sup>1</sup> 22 percent of the strains examined were sensitive, 44 percent intermediate, and 33 percent resistant to sulfadiazine. As indicated, there is some indication that group C isolates were somewhat more resistant to sulfadiazine.

Table 2 shows the *in vitro* susceptibilities to ampicillin, cephalothin, erythromycin, penicillin G, and chloramphenicol. All isolates were susceptible to low levels of the various antibiotics to which subjected.

A comparison was made between the 50  $\mu$ gm disc method and the considerably more tedious agar dilution method of determining susceptibility to sulfadiazine. As indicated,

all sensitive and intermediate strains by the agar dilution method were susceptible by the disc method and all resistant strains by the agar dilution method were resistant to the 50  $\mu$ gm disc of sulfadiazine.

DISCUSSION

Sulfonamide-resistant meningococci have recently been reviewed in detail and some references are suggested for the interested reader.<sup>7, 8</sup> Briefly, the problem of sulfonamide-resistant meningococci received little attention until 1963<sup>9</sup> when it was reported that sulfadiazine prophylaxis failed to reduce the carrier rate in a military population. Subsequently, a report appeared in 1965 which indicated that 28 percent of 70 strains of *Neisseria meningitidis* isolated from civilian patients with meningitis were resistant to ten mg percent sulfadiazine.<sup>4</sup> From these and similar reports it became apparent that serogroups B and C (but not A, presently) are the common serotypes which produce disease and which are sulfonamide-resistant.

As noted in the literature,<sup>2</sup> toxic manifestations due to sulfadiazine increase rapidly when serum levels exceed ten mg percent. Since cerebrospinal fluid levels of sulfadiazine may range from 67 to 80 percent

Table 2.  
SUSCEPTIBILITY OF NEISSERIA MENINGITIDIS ISOLATES TO CEPHALOTHIN,  
AMPICILLIN, ERYTHROMYCIN, PENICILLIN G, AND CHLORAMPHENICOL

Sero-group	Minimum Inhibitory Concentration (μgm/ml)										
	Ampicillin		Cephalothin		Erythromycin		Penicillin G		Chloramphenicol		
	0.39	0.78	0.39	0.78	0.39	0.78	0.39	0.78	0.39	0.78	1.56
B	91*	100	91	100	100		100		27	91	100
C	100		57	100	86	100	86	100	29	86	100

\*Percentage of strains examined which were inhibited by concentration of antibiotic indicated.



Table 3.  
COMPARISON OF SUSCEPTIBILITIES OF NEISSERIA  
MENINGITIDIS ISOLATES TO SULFADIAZINE BY  
THE DISC AND AGAR DILUTION TECHNIQUES

Minimum Inhibitory Concen- tration of Sulfadiazine (mg per cent)	50 $\mu$ gm disc of sulfadiazine	
	Number of isolates susceptible	Number of isolates resistant
0.1	2	
0.5		
1.0	2	
2.0	3	
5.0	2	
10.0		3
20.0		1

of the serum level,<sup>3</sup> it was estimated that strains susceptible to  $\leq 0.5$  mg percent sulfadiazine are susceptible, one, two or five mg percent as intermediate, and  $>10$  mg percent as resistant.<sup>4</sup> Based upon the above criteria, then a correlation can be made of sulfadiazine-resistant meningococci prevalent in the outbreak which occurred in Oklahoma during the early winter months of 1968. Using the postulated figure of five mg percent as an acceptable level of resistance, it can be discerned from Table 1 that 50 percent of the isolates examined were resistant to sulfadiazine. As noted, all isolates were serogroup B or C; no serogroup A meningococci were isolated during this outbreak. Of the 18 strains examined, four were obtained from patients in which the outcome was fatal. All four strains were susceptible to sulfadiazine only at the five to 20 mg percent level. Utilizing some variation in sulfadiazine testing technique, other investigators<sup>7</sup> classify strains which grow on 0.1 but not 1.0 mg percent as partially resistant and those which grow at 1.0 mg percent or more as resistant.

As indicated in Table 3, a good correlation was achieved between the disc and agar dilution methods of determining sulfadiazine susceptibility when using 10 mg percent as the criteria for establishing resistance. However, all intermediate susceptible strains (one, two and five mg percent) were susceptible by the disc method. Therefore, even under optimal conditions of sulfadiazine susceptibility testing, there is the possibility that false susceptibilities can occur,

especially in the intermediate range. In addition, other pitfalls of sulfadiazine testing by the disc method, i.e., failure to set the disc properly, not allowing sufficient time for the antimicrobial agent to diffuse into the agar prior to incubation, use of agar other than Mueller-Hinton, the use of large inocula which contain p-aminobenzoic acid, and other variables can lead to erroneous laboratory results. Moreover, the importance of increased CO<sub>2</sub> tension was recently noted,<sup>4</sup> when it was reported that a 20-fold decrease in susceptibility to sulfadiazine can occur when the test is performed in air.

Based upon the percentage of isolates which were resistant to sulfadiazine, it was of importance to determine the minimum inhibitory concentrations to ampicillin, cephalothin, erythromycin, penicillin G, and chloramphenicol (Table 2). All strains examined were susceptible to the various antibiotics at levels which can be achieved easily *in vivo*. Feldman<sup>7</sup> has examined the sensitivities of over 500 strains to various antibiotics and has suggested the following antibiotics, listed in order of preference, in the therapy of meningococcal infections: penicillin G, ampicillin, chloramphenicol, erythromycin and tetracycline. It should be noted, however, that although sulfadiazine-resistant meningococcal infections respond to antibiotic therapy, an apparent biological paradox exists in reference to the treatment of the carrier state. Based upon various reports,<sup>1, 6, 7</sup> nasopharyngeal carriage is not effectively eradicated by antibiotic therapy. This phenomenon has been attributed either to the formation of bacterial protoplasts during penicillin therapy (which reverts back to the parental form upon cessation of therapy), or to the inability to achieve effective

---

*L. A. Chitwood received his Ph.D. from the University of Oklahoma Medical Center in 1964. His specialty is microbiology. He is presently an Instructor in the Department of Pediatrics at the school of his graduation.*

*Doctor Chitwood is a member of the Society of Sigma Xi, the Electron Microscopic Society of America, the American Society for Microbiology, the New York Academy of Sciences and the Southern Society for Pediatric Research.*



concentrations of penicillin in the posterior nasopharynx. Although the mechanism responsible remains an enigma, a recent report<sup>10</sup> describing the production of meningococcal L forms in the presence of methicillin, ampicillin, and other antibiotics lends support to the possible role of the L-variant.

#### SUMMARY

During the early winter months of 1968 an outbreak of *Neisseria meningitidis* infections occurred in Oklahoma. Previous reports from other geographical areas in the United States had indicated an increasing number of strains of meningococci, especially groups B and C, resistant to sulfadiazine. In conjunction with the Oklahoma State Department of Health, a study was instituted to determine the prevalence of sulfadiazine-resistant meningococci producing disease in the civilian population of Oklahoma. Eighteen isolates belonging to serogroups B and C obtained from patients with meningococcal meningitis were examined for *in vitro* susceptibilities to sulfadiazine, ampicillin, chloramphenicol, penicillin G, erythromycin, and cephalothin. Only 22 percent of the isolates were sensitive, 44 percent intermediate in sensitivity, and 33 percent resistant to sulfadiazine. All strains were susceptible

to achievable levels of ampicillin, chloramphenicol, penicillin G, and cephalothin.

#### ACKNOWLEDGEMENT

The author wishes to express thanks to the Oklahoma State Department of Health, especially Doctors R. C. Bowers, Bill Schmeiding and Ira Kassanoff for providing isolates for these studies. Acknowledgement is also made to Mrs. Vi Patnode for the fine technical assistance provided. □

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800 N.E. 13th Street, Oklahoma City, Oklahoma 73104

## SENATOR HARRIS ENDORSES CHIROPRACTORS

Oklahoma's senior United States Senator, Fred Harris, has listed his name as a co-sponsor of two bills now pending Congressional Action, S.746 and S.1812.

Both of the measures, if passed into law, would permit chiropractors to be paid for services to Medicare beneficiaries.

Senator Harris has been contacted by Rex E. Kenyon, M.D., Chairman of the OSMA Council on Public Policy, requesting that he not only withdraw as a sponsor of these bills but that he also vigorously oppose their passage.

Doctor Kenyon supplied Senator Harris

with documentary proof that chiropractic is an unscientific cult; he included a report presented last December to the Congress by then Secretary of Health, Education and Welfare, Wilbur Cohen, in which the principles of chiropractic were challenged and the recommendation was made to exclude these practitioners from the Medicare program. Also sent to the Senator was an extensive report from the National Council for Senior Citizens in which chiropractic services were also opposed.

The response from Senator Harris will be published in the July issue of *The Journal*.



# Medical Practice: A Case Report

WILLIAM S. MIDDLETON, M.D.

*As appropriate today, this lecture was delivered by Doctor Middleton, a visiting Professor of Medicine, to members of the third year class at the University of Oklahoma School of Medicine during an Interdepartmental Conference in 1964.*

THE LITERARY allusions to medicine and its practitioners have been a part of your educational heritage. You will not have been misled by the fulsome praise that elevates the practitioner beyond his human limitations. Conversely, as you have read the works of Voltaire, George Bernard Shaw, and others, you have come to realize that barbs have been directed toward our profession for centuries past. They will undoubtedly continue. However, it is an unusual circumstance that the present time finds medicine and medical science of a stature never before conceived, yet confronted by an attitude of the laity that holds the profession at large in questioned status and the individual practitioner in deep respect. Phrased mildly, medicine does not have a kindly press. Moreover, in the United States the military draft affects the physician at an

age period beyond that of the ordinary citizen. By reason of the medical demands of the services, a further discrimination is observed in the call-up of physicians. Nor has medicine fared well in the political arena. Assuming that voluntary health insurance is not an adequate means to meet the medical requirements of the aging population, compulsory insurance has now become a political chess match and the aging ill or disabled citizen the pawn. Certain of the most pressing problems of the present congress center about this issue. One element of government advocates compulsory health insurance under the Social Security Program closely patterned after the systems of Great Britain and countries of Europe.

Medicine has been placed in a compromised position in its fabian policy toward social reform. The American Medical Association early opposed prepayment health insurance. Hospitalization insurance was also resisted by this body. In the early thirties during the recession, I encountered an amusing change of attitude midstream. With the general counsel of the Wisconsin State Medical Society, I was scheduled to speak before the Portage County Medical Society in Stevens Point, Wisconsin. As we traveled north my friend offered many arguments against the acceptance of the delivery fee of \$35.00 by physicians from federal sources. The program had been developed in the interest



of maternal welfare. He stated that he had been instructed by the American Medical Association to denounce this governmental subsidy of medical practice. After he had presented his case before the Portage County Medical Society, the secretary of that group arose and said, "Gentlemen, I would like to read you a letter that I have just received from the American Medical Association, which says that physicians of the country at large should get behind this movement and accept fees from the federal government for the delivery of mothers at the rate of \$35.00." I cite this as concrete evidence of a short-sighted attitude of organized medicine under specific conditions in the past.

My remarks are directed to you, because you are the medical leaders of the future and must be acquainted with some of the factors that have contributed to the deterioration of our public and personal relations. You have had much information regarding the shortage of physicians. At one time in Wisconsin, had I been given the authority to move 50 physicians from overcrowded urban areas on Lake Michigan to points of inadequate professional coverage, we could have had a physician within 20 miles of any habitation in the state. Obviously under these circumstances, the problem was one of distribution and not numbers. In a constructive sense, efforts should be made to afford adequate distribution as well as total numbers of physicians. When you are ultimately considering your permanent scene of practice, you will take into account many factors besides the actual professional advantage of a given location. In this respect I would earnestly advise you to make your wife a complete partner in the selection of your permanent home and the site for your medical career. Then, too, the availability of physicians must be a primary consideration, both from an altruistic and an ulterior standpoint. The conventional habit of an afternoon or a weekend off will depend upon the practice of the community; but, whatever may be the custom, under no circumstance should it impose a hardship upon any member of the community requiring medical service. By the same token, in the interest of personal health and hygiene, the physician is ill advised who does not arrange

for a periodic surcease from his practice. Mutual interest has led to arrangements for available coverage when the physician himself is not on call. In one neighboring state, however, over 60 percent of the private practice outside of hospitals is in the hands of osteopaths. To my dismay, as I have traveled through a prosperous farming area of Wisconsin, upon death or retirement regular physicians have been replaced by chiropractors or osteopaths. Furthermore, in certain communities, chiropractors advertise, "I Make Night Calls."

Some years ago, Doctor Sheldon, a revered practitioner over 80 years old, came into the Madison General Hospital weary and bedraggled one morning. Upon meeting several of the young physicians in the doctors' dressing room, there was the general query, "Well, what's up, Grandpa?" He answered, "This morning a little mother called me at three o'clock and said her baby was sick with the colic. She did not know what to do about it and had called four or five physicians who were not available." Red faces went about the circle. Doctor Sheldon continued, "When I got there, the baby really needed attention; but the mother was generous. She said the other physicians doubtless had other calls to make." The lesson to be drawn from this episode is that, were the patients or their families able completely to interpret the symptoms of illness, there would frequently be little occasion for professional advice. You must not neglect your duty in the care of the individual patient who will be your responsibility of the future.

Much of the deterioration of personal relationships has been laid to the rapid spread of specialization and to group practice. In neither instance is there a valid basis for these charges. Specialization does not eliminate personal professional responsibility. Group practice must not become impersonal, lest it destroy the foundations of clinical practice. A given individual within the group should assume continued responsibility for the immediate care of the given patient, whatever may be the requirements for consultation.

With the tremendous scientific resurgence of our day, there is an increasing tendency to lean upon the laboratory in deriving answers to our clinical problems. In fact, the



laboratories have made cowards of us all. When we deal profoundly in milliequivalents and millimols, let us not lose sight of the true object of our study . . . the party of the first part, the patient. Confronted by difficult clinical problems we would do well to keep our patient advised of the direction and significance of proposed studies. Let us never be deluded by random probing. This practice has atrophy of discernment as its first by-product. My appeal is for thoughtful, directional laboratory studies to supplement and extend clinical observations. In this frame of reference, not only is the vital function of the laboratory protected, but the attending physician grows in professional stature.

With the growing lay interest in medical advances, there has been a radical change in the dissemination of medical knowledge. Newspapers, magazines and periodicals of every order respond to the demands for such information by articles of varying weights and measures. While much of the contained technical data is beyond the ken of the average layman, his appetite will not be satisfied by bland commonplaces or overt evasion. A considerable body of science writers has arisen in our midst, and many of the articles in the lay press are well written and factually accurate. As physicians we will do well to adjust ourselves to the changing pattern. The day is past when the physician may set himself aside, write a prescription in illegible Latin and alienate himself from the patient by assuming that the patient and his family are incapable of appreciating properly tempered medical information.

An important lesson in reverse may be drawn from a consultation on a famous patient whose two physicians related the following contrasting reactions to me. Sir John Parkinson, the eminent cardiologist of London, beamed with satisfaction as he told me of his recent consultation on Sir Winston Churchill with Lord Moran. A few days later, my surprise was great when Lord Moran said, "Middleton, I had John Parkinson see Winston Churchill the other day and he took an hour and a half, or two hours, for the job. As you would expect, it was a thorough going examination; but when he

got through he did not say a word to Winston regarding his condition. When I returned to see Winston, he said, 'What goes here? Parkinson spent an hour and a half examining me; and, when he was finished, he did not tell me a blasted thing!' " Clearly silence may limit or destroy your usefulness. In contact with the patient, remember that he is the party of the first part and should have as much information as he can assimilate usefully in cooperative therapy. In this partnership there should be only a reservation as to the elimination of information that may harm or seriously discourage the patient. We must not alienate the patient by the use of high sounding technical phrases without imparting a clear picture of the underlying basis of his symptoms or disabilities.

Perhaps one of the most serious factors in disaffection between the patient and the physician is financial. Traditionally physicians are poor businessmen. While I would not perpetuate this unfortunate circumstance, by the same token I would be disappointed were the monetary objective the primary motivation of your generation in medicine. The servant is worthy of his hire and I bespeak for all of you a secure and comfortable income during your careers in medicine. This hope for your future does not include the biggest house or the biggest car in town. Do not attempt to live up to the Joneses. In the opinion of some, the apparent disproportional income of certain physicians has set our profession apart from the mass. This situation, that renders us more vulnerable to criticism, should lead us to condemn all irregularities in practice. The image of medicine has been seriously impaired by fee-splitting and phantom surgery.

After we have diagnosed certain of the ills of medical practice, as physicians we natural-

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ly look to their prognosis and treatment. The recognition of ill health by the patient is the first step toward its treatment. Since our profession is held sub judice by a questioning public, we must take steps to remedy the situation. It has been a source of deep satisfaction to find that many of the circumstances that I have outlined, have been recognized and treated in your community. The coming generation in medicine must take its place in society as servants, not masters. The time is long past when physicians can assume that they have the exclusive vested interest in health. This commodity affects the entire population and problems of health must be met by all of the social agencies that can assure its maintenance. In 1909 Doctor Henry Baird Favill said, "The pathology of society is as much the responsibility of the medical man, as is the pathology of disease." In a word, you cannot divorce disease from the patient, the family, the community. Its total impact on the social fabric may be all pervasive and overwhelming. Instead of maintaining our archaic attitude of responsibility for the sick person alone, we must perforce accept the partnership of all who are affected in the family and community. In a word, this is a two-way process and the ecology of disease involves intimately its sociologic origins and impacts. While at the bedside there is a single person in whom you are interested; before the total picture can be clarified you must know the influence of the personal contacts, family life, industrial and social exposures on the patient who is the present subject of your study.

Granting these circumstances, as you enter the practice of medicine, you will have

reconstructed your approach and prospect with the broader concept of the place of medicine in the social fabric. You will maintain the intimacy of the patient-physician relationship by encouraging intelligent interchange relative to the patient's status, progress and prognosis. A few extra minutes of conversation at the bedside or in the office may be as revealing to you as it is comforting to the patient. One of the conspicuous psychological by-products of illness is the increased need for support. Without maudlin sentimentality, rapport with the sick may be a determining factor in the restoration of health. A number of years ago, the Colorado Medical Society initiated a movement that has spread to cover the entire country. At the county or community level, a grievance committee receives and resolves complaints of varying orders; but, psychologically their influence is much broader in affording the public a forum for resolving differences with our profession. The solutions to personal and financial difficulties can be derived by the application of a common ethical code. In many of the issues that we have raised, the direct answer lies in a considerable measure in the compassionate heart. At times it is the difference between health and disease, life and death. Francis Peabody once said, "The secret of the care of the patient is in caring for the patient." In the clear conception of your opportunity and responsibility of the future, you will maintain the credo that "Medicine exists for the benefit of the afflicted, not the afflicted for the benefit of medicine." □

2114 Adams Street, Madison, Wisconsin

## CHIROPRACTORS ENTER POLITICS

Oklahoma chiropractors have established the "Chiropractic Political Action Committee" for the purpose of electing chiropractic-oriented candidates to office in both the Oklahoma Legislature and the U.S. Congress. It is reported that more than \$5,000 has already been raised.

This new political organization is comparable to the Oklahoma Medical Political Action Committee which is supported by medical doctors.

Physicians interested in joining OMPAC may send their dues to "OMPAC," P.O. Box 75341, Oklahoma City, 73107. Regular memberships are available at \$20 annually, and sustaining memberships at \$100.00.



# Residency Training in Aerospace Medicine; Yesterday and Today

J. ROBERT DILLE, M.D.

*The OU Medical Center has one of two approved residency training programs in Aerospace Medicine to help meet the need for 125 more civilian specialists by 1975.*

**P**ILÂTRE DE ROZIER, a surgeon-apothecary from Metz, France, made the first flight in a free fire-balloon on October 15, 1783. John Jeffries, an American physician, made the first balloon voyage across the English Channel on January 17, 1785. Leonhard Euler (1707-1783), George Fordyce (1736-1802), James Tytler (1747-1805), and Edward Jenner (1749-1823) were other physicians who were active in aeronautics in the Eighteenth Century. Felix Tournachon, a medical student, became the father of aerial photography. However, none made any significant observations on the medical aspects of aerial flight.

The first severe ear pain with flight was described by the physicist, J. A. C. Charles, on a rapid ascent to 10,000 feet on December 1, 1783. Hypoxia had been described by Father Acosta on travels in the Andes Mountains in 1590. The role of oxygen, which had been described by Lavoisier in 1795, was

studied in an altitude chamber by the physiologist, Paul Bert (1833-1886). Sevil, Crocé-Spinelli, and Tissandier took bags of oxygen on a balloon flight which reached 8,600 meters on April 15, 1875. Unfortunately, the supply was inadequate; all lost consciousness and only Tissandier survived the flight.

There was little activity in aviation physiology between the publication of Bert's book, "La Pression Barometrique," in 1878, and the Wright brothers' flight on December 17, 1903.

Faith and determination were perhaps the only pilot requirements in 1903. The U. S. Army acquired its first airplane in 1908. The first military pilots met only general duty medical standards; these were generally lax but there were exceptions. Disqualification for "malocclusion more than mild," which was a standard until 1943, has been traced to a Civil War requirement that officers and enlisted men be able to pull the corks from powder flasks with their teeth.

In February 1912, a memorandum was sent from the Surgeon General of the Army to the Army Chief of Staff containing a draft of instructions for special preliminary examination of the candidates for flying training at the Signal Corps Aviation Field. This was the first known set of physical standards proposed for the performance of flying duty. It was also one of the first actions in an area that was to become the specialty of aviation (later aerospace) med-



icine. "Normal" vision, "normal" hearing and drums, and the ability to estimate distances (no standards) were required. Disqualification was proposed for: color blindness; a history of any acute or chronic disease of the middle ear, inner ear, or auditory nerve; any disease of the respiratory, circulatory, or nervous systems; or a history of any chronic digestive disturbance or intestinal disorders tending to produce dizziness, headaches, or impaired vision. Equilibrium testing was also recommended, consisting of testing the ability to stand, walk and hop on one foot and on both feet with the eyes both open and closed. The ability to walk and hop in a circle as well as in a straight line, both forward and backward, was also to be determined. Any persistent deviation was to be disqualifying.

It is doubtful whether these standards were ever applied, for in 1914 the Surgeon General of the Army was requested to provide an exam for young officers applying for aviation duty. No reference was made to the 1912 proposal or to other standards. Instead, arbitrary standards were made up, reportedly with the aid of a physiology textbook. No candidate successfully passed this exam during the first six to eight weeks so more lenient standards were requested and established.

In May 1917, new standards were established which included, for the first time, tests and normal values for eye muscle balance, fusion, intraocular tension, visual fields, accommodation, nasal patency, and eustachian tube patency. A turning chair test replaced the walking and hopping test for equilibrium evaluation. Examination by specially indoctrinated physicians at 35 designated centers was first required at this time.

During the first year of World War I, information from Great Britain, France, and Italy revealed that two percent of permanent pilot losses were due to German action, eight percent were due to mechanical failure, and 90 percent were due to failure of the pilot. (Most of the flights this year were reconnaissance missions with very little aerial combat.) The RAF reported that two-thirds of the pilot failures were due to physical defects. All three of these countries, plus Germany, started medical programs for the

selection and care of pilots and research into the problems of flight. As a result of their Care of Flyer Service, the RAF reported that their losses due to physical deficiencies dropped from 66 $\frac{2}{3}$  percent to 20 percent the second year and 12 percent the third year.

In the United States, Doctor Yandell Henderson, a member of the Oxford-Yale expedition to Pike's Peak to study the effects of high altitude, was appointed chairman of the Aviation Medicine Research Board on October 18, 1917. Physicians were sent to Europe to investigate the high aircraft accident rate and the work of our allies in aviation medicine.

The Air Service Medical Research Laboratory began operations at Hazelhurst Field, Mineola, Long Island, on January 19, 1918 with William H. Wilmer, M.D., as the first Director. The term Flight Surgeon was devised there in March 1918. A group of 33 Medical and Sanitary Corps officers from the Laboratory embarked for service with the A.E.F. in August 1918 in response to a cablegram from General Pershing.

#### MILITARY TRAINING PROGRAMS

The School for Flight Surgeons was formed under the Air Service Medical Research Laboratory in May 1919. In November 1919 it was moved to Mitchel Field, Long Island. Fifty Flight Surgeons and 50 assistants, or Physical Directors, were authorized.

A course of four to five weeks was given with emphasis on eye, ear, nose, throat, cardiovascular, physiological, psychological, and psychiatric problems and examinations. Studies in psychiatry were given particular emphasis. The Flight Surgeon was then assigned to a flying field where he kept in close touch with the aviators; studied their habits, temperaments, and physical fitness; and advised the aviators and the commanding officers on nutrition, exercise, rest, recreation, and temporary excuse from duty. Routine and special physical examinations were conducted. The great value of actual flying was recognized and the Flight Surgeons were given an opportunity to take courses in flight instruction both at Mineola and in the field.

The School was renamed the School of



Aviation Medicine on November 8th, 1922. It was moved to Brooks AFB, Texas, in June 1926; to Randolph AFB, Texas, in 1931; and back to Brooks AFB in 1959. The name was changed to the USAF School of Aerospace Medicine in 1961.

The number of students has varied with national defense needs but the curriculum of the present nine-week USAF basic course covers most of the same topics as the 1919 course. In addition to the great advances in medical knowledge to be covered under these topics, there are now lectures in such subjects as space medicine, radiobiology, missile support, tropical medicine, and aerospace pathology. Through June 1969, 12,877 Army, Air Force, and Navy Flight Surgeons were graduated from this course. The U. S. Navy established a School of Aviation Medicine at Pensacola, Florida, and began training its own Flight Surgeons in November 1939. Through June 1969 there were 3,842 graduates of the Navy's six-month basic course. The Army, faced with greater training requirements than the Air Force or Navy could provide, began its own five and one-half week Basic Army Aviation Medical Officer Training Course at Ft. Rucker, Alabama, in 1964. Through June 1969 there had been 609 graduates of this course.

The Air Force first offered a one-year advanced course in 1949. Through June 1969, 241 had completed this course which became a part of their three-year residency program in aerospace medicine. As of the same date, 43 had completed the Navy residency program which was begun in 1957.

Aviation medicine was recognized as a subspecialty of the American Board of Preventive Medicine in 1953.

The present objectives for training in the specialty, for both the military and the civilian programs, include the following topics:

Requirements for Master of Public Health Degree:

- Biostatistics
- Epidemiology
- Public Health Practice
- Industrial Hygiene and Sanitary Engineering
- Microbiology and Tropical Public Health

Basic Sciences Relating to Aerospace Medicine:

- Anatomy
- Physiology
- Biochemistry
- Biophysics
- Pathology
- Pharmacology
- Toxicology
- Nutrition

Clinical Sciences Relating to Aerospace Medicine:

- Cardiovascular Diseases
- Pulmonary Diseases
- Neurology
- Psychiatry
- ENT
- Ophthalmology
- Surgery
- Gastroenterology
- Metabolic and Degenerative Diseases

Biomechanics and Biomedical Engineering:

- Human Factors in Design
- Acceleration and Impact
- Vibration
- Radiation
- Electronics and Instrumentation
- Bioacoustics—Noise
- Environmental Control

Practical or Operational Aerospace Medicine:

- Selection and Placement
- Health Services
- Flying Safety and Accident Prevention
- Disability and Retirement
- Aircraft Accident Investigation
- Patient Transportation
- Protective Equipment
- Survival
- Hyperbaric Medicine

Administration:

- Principles and Organization
- Legal
- Management Techniques
- Budget and Finance
- Communication Skills

The fatality in the crash of the Army's first airplane, on September 17th, 1908, was due to a skull fracture when the pilot's head struck the aircraft structure on impact. The need for crash helmets and restraint systems was observed at the time. With up to 85 percent of fatal aircraft accidents still due



to human factors, there is a continuing, even increasing, need for emphasis upon accident investigation to determine crash-injury correlations and causes.

Increased civilian and military passenger flights at high altitudes, a rapid increase in pressurized and unpressurized general aviation aircraft which can cruise at high altitudes, increased training in the physiological effects of such flights in low pressure chambers, increased flying after SCUBA diving, and research have resulted in an increased risk of aviators' decompression sickness. Like divers' bends, the present treatment of choice is recompression. Therefore, in recent years, emphasis has also been placed on training in hyperbaric medicine.

The other topics have similarly been identified to meet operational requirements.

Assignments vary widely. It should be appreciated that training requirements vary widely for duties in the jungles of Vietnam, outer space, the design of space vehicles, research, pilot duties, administration, and clinical medicine. While priorities vary according to duties and employers, most positions have a wide variety of duties and there are numerous transfers. Therefore, the aim of all programs is to produce a specialist capable in all of these areas.

#### CIVILIAN TRAINING PROGRAMS

The Federal Aviation Administration has conducted three-day seminars for their designated aviation medical examiners for almost ten years. Ohio State University has

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*Doctor Dille is a member of the Aerospace Medical Association and a Fellow of the American College of Preventive Medicine.*

conducted short postgraduate courses in aerospace medicine in the past. These have served more as refresher courses than as adequate basic courses in the specialty for civilian physicians. The need for a basic course for civilian physicians is presently being studied by the Education and Training Committee of the Aerospace Medical Association.

The first civilian residency program in aerospace medicine was established at Ohio State University in 1955. Through June 1969, 29 residents had completed the Ohio State program.

The second, and only other, civilian program was approved at the University of Oklahoma in June 1967 as a joint venture between the OU Medical Center and the Federal Aviation Administration's Civil Aeromedical Institute. In the second year, just completed, the program had three first-year and three second-year residents. The program is designed to accommodate four residents in each of the three years—usually two each year from the federal government and two funded from traineeships provided by the National Aeronautics and Space Administration.

The traineeships presently provide a \$6,000 per year stipend, \$1,000 per year family allowance, tuition for the MPH year, books, travel expenses, and moving expenses, if necessary, for the third year program.

The first year program at OU provides the subjects listed above under the MPH program, a regular seminar in aerospace medicine, and a broad choice of electives leading to the MPH degree.

The second year program covers most of the remaining topics listed above, including flying training, a research project, practice in lecturing pilot groups and experience in writing a clinical case report.

The third year is one of supervised practice of the specialty. Assignments may include clinical, research, administrative, teaching, and accident investigation duties with the FAA; research or the clinical practice of space medicine at the NASA Manned Spacecraft Center or NASA Ames Research Center; or research and clinical practice in affiliated programs at the Mayo Clinic or the Lovelace Clinic.

Upon completion of training, ample em-



## Training / DILLE

ployment opportunities exist with airlines, aerospace industries, and the federal government. At a conference on Training in Aerospace Medicine, in Columbus, Ohio, September 28th-29th, 1967, a need for between 125 and 150 additional fully-trained specialists in the civilian aerospace medical community was estimated by 1975. This does not include the growing need for physicians in private practice at airports.

Salaries reported at the Columbus Conference averaged about \$20,000 per year for those with board certification. Liberal fringe benefits and interesting duties are provided by most employers.

Further information on training programs and employment opportunities in aerospace

medicine is provided in the report of the Columbus Conference.

Information on the OU program can be obtained by writing J. Robert Dille, M.D., Director of Training, Residency in Aerospace Medicine, Civil Aeromedical Institute, P.O. Box 25082, Oklahoma City, Oklahoma 73125. □

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# Fatal Granulocytopenia: The Case Against Aminopyrine Drugs

JOHN A. MOHR, M.D.  
RICHARD A. MARSHALL, M.D.

*Fatal Granulocytopenia associated with  
dipyrone therapy seemed to condemn  
the use of the drug especially in view of  
the general availability of safer  
and equally effective agents.*

**F**OLLOWING ITS introduction in 1897, aminopyrine was widely used throughout the world as an effective antipyretic and analgesic until 1935. In the latter year Kracke and Parker<sup>6</sup> reviewed 172 cases of granulocytopenia which had occurred in a four year period and found that 153 were associated with the administration of aminopyrine. The first such case of granulocytopenia was described in 1922,<sup>10</sup> however, it was not until 1933 that Madison and Squier established a causal relationship between aminopyrine and agranulocytosis. They reproduced the syndrome with a test dose of the drug in patients who had previously developed granulocytopenia while receiving aminopyrine.<sup>7</sup> Subsequent to the Kracke and Parker report the use of aminopyrine vir-

tually stopped in this country. However, dipyrone, the sodium sulfonate derivative of aminopyrine, has been used increasingly.<sup>5</sup> In 1935, Blake<sup>3</sup> reported the first case of agranulocytosis associated with dipyrone. Numerous cases have subsequently been reported to the Registry of Adverse Reactions.<sup>4</sup>

The purpose of this paper is to report three additional cases which have been observed during the past six years.

## CASE NO. 1

A 17-year-old Caucasian female was in good health until three weeks prior to admission when she developed fever and sore throat. She consulted her family physician who placed her on daily injections of penicillin and dipyrone for seven days. The sore throat and fever persisted and on re-examination a peritonsillar abscess was found and surgically drained. Streptomycin was added to the above therapy and continued for ten days with clearing of her sore throat and fever. Four days prior to admission she again developed a sore throat, malaise and fever (101°F). At this time her hematocrit was 38 percent, the hemoglobin, 10 grams percent and the white blood count was 8,300/cu mm. She was continued on the same medications and two days prior to admission she developed a maculopapular eruption on the

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legs associated with diarrhea. One day prior to admission the patient was hospitalized elsewhere because of shock, which failed to respond to whole blood, hydrocortisone, and Aramine. The white blood count had fallen to 1,600/cu mm and she was transferred to the University of Oklahoma Medical Center on 8-27-61. The patient appeared acutely ill with a temperature of 102°F, pulse 160/minute, blood pressure 70/40 mm of Hg. and respiratory rate 36/minute. Her skin was dry and hot with a maculopapular eruption on the face, chest, arms and legs. The abdomen was distended, bowel sounds were absent and the spleen was palpated three cm below the left costal margin. At this time her hemoglobin was 10.9 grams percent, the hematocrit was 35 percent and the peripheral white blood cell count was 2,000/cu mm with no granulocytes seen on peripheral smear. The platelets were normal. Three blood cultures grew *Pseudomonas aeruginosa*.

The patient was continued on intravenous fluids containing hydrocortisone and Aramine® but remained hypotensive and oliguric. She died two and one-half hours after admission.

Autopsy revealed a hypocellular bone marrow which contained erythroid cells and megakaryocytes (but no granulocytic precursors), and passive congestion of the liver, spleen and lungs.

CASE NO. 2

A 19-month-old child was in good health until August 27th, 1963, when she developed a sore throat and fever for which she was treated with daily tetracycline and dipyrone. Sore throat and fever subsided after three days but recurred after seven days of treatment. At this time she received penicillin and was continued on dipyrone. On 9-13-63, she was admitted to another hospital because of bloody diarrhea, fever, anterior cervical adenopathy, and small ulcers in the oropharynx. A peripheral blood smear revealed no granulocytes and she was transferred to Presbyterian Hospital, Oklahoma City where she appeared acutely ill with the above signs and symptoms. Her hemoglobin was 7.1 grams percent, the hemato-

crit 24 percent, the white blood count, 3000/cu mm with 97 percent lymphocytes, reticulocyte count nine percent, and normal platelets. The patient was started on intravenous fluids containing penicillin and methicillin. The peripheral white blood count continued to fall to 1,000/cu mm without any granulocytes. Bone marrow revealed erythroid cells, but no granulocytic precursors. Three blood cultures failed to grow any microorganisms. She failed to respond and expired on the sixth hospital day.

Autopsy revealed hypocellular marrow without granulocytic precursors, congested liver, spleen and lungs, with blood in the small intestine.

CASE NO. 3

A 64-year-old woman was admitted to another hospital after treatment (for a sore throat associated with fever and chills), with oral penicillin and dipyrone. The fever, chills and sore throat subsided after three to four days but after ten days of treatment with penicillin and dipyrone the fever and sore throat recurred and were associated with nausea and vomiting. She was continued on penicillin and dipyrone for another 11 days without any improvement and she was referred to Presbyterian Hospital, Oklahoma City where she appeared acutely ill with a temperature of 103°F, a pulse of 110 per minute, blood pressure 117/70 mm Hg and a respiratory rate of 24 per minute. Her skin was hot and dry. Oral mucous mem-

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branes were erythematous with pin point hemorrhages. The remainder of the examination was normal. The hemoglobin was 10.9 grams percent, the hematocrit 36 percent and the peripheral white blood count was 1,300/cu mm with 100 percent lymphocytes. Blood urea nitrogen and electrolytes were normal. Blood and urine cultures failed to grow microorganisms. The patient's course was characterized by progressive deterioration, rise in temperature to 106°F, and a continuous fall in WBC to 500/cu mm without any granulocytes present on peripheral smear. Bone marrow revealed a marked paucity of the granulocytic series, with the erythroid series, megakaryocytes and lymphocytes in adequate numbers. The patient expired on the fifth hospital day and an autopsy was not performed.

DISCUSSION

In 1936 Benjamine and Biederman reported a patient who, after recovery from agranulocytosis secondary to aminopyrine, developed fever, chills, and a leukopenia following the ingestion of ten grains of an aminopyrine derivative, Novaldine.<sup>2</sup> This work was extended by Moeschlin and Wagner in 1952 who demonstrated that blood taken from sensitive individuals three hours after a test dose of aminopyrine produced a marked depression of the granulocytes in normal individuals.<sup>9</sup> In 1955 Moeschlin reported further evidence of an immunological mechanism by demonstrating that the serum of sensitive patients would agglutinate leukocytes only in the presence of the drug.<sup>8</sup>

Even though there is little question about the efficacy of aminopyrine or its derivatives as analgesics or antipyretics, there have been no double blind randomized studies comparing these drugs with another drug to determine their relative effectiveness. The studies of Wolff and associates indicate that aminopyrine and aspirin as analgesics are identical in equal doses.<sup>11</sup>

Aminopyrine and some of its derivatives have been advocated in the treatment of diabetes insipidus,<sup>1</sup> to aid anabolism, and other conditions in which much less hazardous drugs are available, such as in the case of hyperpyrexia. There are several antipyretics available in addition to aspirin, as well as physical measures which are especially useful in children where about 50 percent of the reported fatalities with aminopyrine have occurred.

Generic and Trade Names of Drugs

Dipyrone - - - - - Pyrilgin  
(Savage)

Hydrocortisone - - Solu Cortef  
(Upjohn)

Metaraminol - - - - - Aramine  
(Merck, Sharpe & Dohme)

ACKNOWLEDGMENTS

We wish to thank Doctors Nicholson and Lawson for permission to use their cases from Presbyterian Hospital, Oklahoma City, Oklahoma. □

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# Abstracts

## FECAL TRIGLYCERIDES. I. Methods

The authors describe their technique of quantitative analysis of fecal triglycerides by use of thin-layer chromatographic separation and photodensitometry of charred triglyceride chromatographic spots. Qualitative studies on the triglyceride chromatographic zone showed wide separation of the mono, di, and triglycerides and various alcoholic esters of fatty acid. Studies of frozen stool demonstrated that some form of triglyceride lipolysis probably takes place due to pancreatic lipase. This was approximately seven percent per week.

## FECAL TRIGLYCERIDES. I. Methods

J. B. Thompson, R. L. Langley, D. R. Hess, and J. D. Welsh. *J. of Lab. and Clin. Med.*, 73: 512-520, 1969.

**Reviewer's Note:** This method provides a relatively simple and accurate quantitative method for measuring fecal triglycerides which helps to define the mechanism of steatorrhea.—C. Bloedow, M.D.

## FECAL TRIGLYCERIDES. II. Digestive Versus Absorptive Steatorrhea

In this second article the authors report the results of their comparative study of steatorrhea in patients with pancreatic insufficiency (intraluminal digestive steatorrhea) and intestinal disease (absorptive steatorrhea). A significantly greater fraction of the fecal fat was in triglyceride form in cases of pancreatic steatorrhea. The authors showed highly significant differences in values and were able to use this test to distinguish between digestive and absorptive forms of steatorrhea. They discuss the limitations of tests currently used, as total fecal fat, Sudan III stain, the  $^{131}\text{I}$  triolein test and serum chylomicron test.

Previous studies have shown a lack of correlation between the pathophysiological defects causing steatorrhea and total fecal fat output, total fat per 100 Gm. of feces, stool weight, or water content. Mean fecal triglyceride output for intestinal steatorrhea was 0.1 Gm/24 hrs.; for pancreatic insufficiency, 8 gm. Fecal triglyceride in Gm/100 Gm. feces was 0.1 Gm. for intestinal steatorrhea and 2 Gm. for pancreatic insufficiency.

Thus the measurement of fecal triglyceride will provide a means of distinguishing digestive from absorptive steatorrhea.

## FECAL TRIGLYCERIDES. II. Digestive Versus Absorptive Steatorrhea. J. B. Thompson, C. K. Su, R. E. Ringrose, and J. D. Welsh. *J. of Lab. and Clin. Med.*, 73: 521-530, 1969.

## INTESTINAL DISACCHARIDASE ACTIVITY IN CELIAC SPRUE (Gluten-Sensitive Enteropathy)

Disaccharide malabsorption, attributed to reduced intestinal digestive absorptive surface from mucosal damage, has been identified in celiac sprue. The authors examined intestinal biopsy specimens from patients with celiac sprue to determine: (1) relationship of histological appearance of the intestinal mucosa

to enzyme activity; (2) variability of histology or disaccharidase activity between two specimens of intestine in close anatomical proximity; and (3) the relationship of the changes in enzyme activity and lactose absorption while the patient was receiving a gluten-free diet.

The mean disaccharidase and alkaline phosphatase activities increased from low levels associated with severe mucosal lesions to higher levels with moderate-mild lesions. Paired specimens from adjacent sites revealed similar morphologic changes in 70 percent of the pairs. Lactase activity was the same in all pairs while the other enzymes (sucrase, alkaline phosphatase, palatinase, and maltase) were the same in 74 to 86 percent. Although clinical improvement followed fair adherence to a gluten-free diet, mild histologic changes and a complete return of enzyme activity occurred only in those patients adhering strictly to the diet. Normal lactase activity was not demonstrated with severe or moderate lesions; maltase activity was the most frequently normal. The mean height of the surface epithelial cells was similar in moderate and mild lesions; however, normal enzyme activities, other than lactase, occurred only in specimens with mild lesions—supporting the idea that low enzyme activities reflect both quantitative and qualitative changes of the epithelial cells.

Intestinal Disaccharidase Activity in Celiac Sprue (Gluten-Sensitive Enteropathy). Jack D. Welsh, M.D., Opal M. Zschesche, M.D., Juanetta Anderson, and Anthony Walker, B. S., *Arch. Intern. Med.*, 123: 33-38, 1969.

**Reviewer's Note:** Another well done study.—C. Bloedow, M.D.

## RECENT PUBLICATIONS

The *Journal* welcomes the opportunity to list current publications by any Oklahoma physician.

Isolation from a Salivary Gland of Granules Containing Renin and Kallikrein. T. S. Chiang, E. G. Erdos, I. Miwa, L. L. Tague, and J. J. Coalson. *Circ. Res.*, 23: 507-17, 1968.

An Electron Microscopic Study of Bowen's Disease. R. L. Olson, R. Nordquist, and M. A. Everett. *Cancer Research*, 28: 2078-2085, 1968.

How I Treat Pityriasis Rosea. D. Weigand, *Postgrad. Med.*, 44: 269, 1968.

Attempts to Induce Anaphylaxis in the Hamster. G. A. Garabedian, W. L. Ellis, L. V. Scott, and R. A. Patnode. *Proc. Okla. Acad. Sci.*, 47: 425-428, 1968.

Early Effects of Hemorrhagic Shock on Surface Tension Properties and Ultrastructure of Canine Lungs. V. M. Barkett, J. J. Coalson, and L. J. Greenfield. *Johns Hopkins Med. J.*, 124: 87, 1969. □





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**Side Effects:** Infrequent and minor side effects include nausea, metallic taste and furry tongue. Gastrointestinal disturbances, flushing and headache sometimes occur, especially with concomitant ingestion of alcohol. The taste of alcoholic beverages may be altered. Other effects, all reported in an incidence of less than 1 per cent, are diarrhea, dizziness, vaginal dryness and burning, dry mouth, rash, urticaria, gastritis, drowsiness, insomnia, pruritus, sore tongue, darkened urine, anorexia, vomiting, epigastric distress, dysuria, depression, vertigo, incoordina-

tion, ataxia, abdominal cramping, constipation, stomatitis, numbness or paresthesia of an extremity, joint pains, confusion, irritability, weakness, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

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*In men:* When trichomonads are demonstrated, one 250-mg. oral tablet twice daily for ten days in conjunction with treatment of his female partner.

**Dosage Forms:** Oral tablets—250 mg.  
Vaginal inserts—500 mg.

\*Complete list of references on request.

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# Tumor Board Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.

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## CASE No. 11: Adenocarcinoma of the Breast, Localized

**PRESENTATION:** The patient is a 61-year-old Caucasian female, who first noted the appearance of a mass in her left breast seven months prior to this admission. This mass progressively and painlessly enlarged until three months ago when she noted the appearance of a similar mass above and lateral to the original one. This also has pro-

gressively enlarged and is now causing some discomfort. About two weeks ago she noticed that the second mass had apparently extended into her left axilla. She has no symptoms related to her pulmonary, hepatic or skeletal systems. Abnormal physical findings are essentially limited to the lesion in the left breast, which is approximately six by eight cm, irregular, very hard and appears to be attached to the skin. There is some retraction of the nipple and the mass seems to be attached to the pectoral fascia. The second lesion above and lateral to the first lesion is about four by ten cm, and it extends into the left axilla. There is a large fluctuant area above which may be full of necrotic tumor. The routine laboratory data on this admission were essentially normal. A radiographic survey reveals a compression fracture of the first lumbar vertebra, which does not appear to be associated with an osteolytic lesion. A chest x-ray is negative except for the obvious masses in the soft tissue of the left breast and axilla. The liver scan was also read as being negative for evidence of tumor.

**DOCTOR GREENFIELD:** Is there any swelling of the arm on that side?

**PRESENTER:** No, there is not.

**DOCTOR GREENFIELD:** Is she having arm pain?

**PRESENTER:** No, she is not. The only discomfort that she is having or at least all that she admits having is this discomfort which is described as an aching in the fluctuant mass above and lateral to the breast.

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician.



DOCTOR BOTTOMLEY: She is not having back pain?

PRESENTER: No, she denies it.

DOCTOR BOGARDUS: Doctor Greenfield, would you care to describe what you found on this patient?

DOCTOR GREENFIELD: This lady has evidence now for advanced tumor that would appear to be still limited to regional involvement, assuming that the bony destruction present in the back is an old compression fracture. She has two bulky tumor masses in close proximity, one of which is extending well into the axilla, and would represent either a secondary extension of the tumor or more likely nodal involvement which has perhaps bled. The fact that she still has regional disease and what appears to be imminent skin breakdown bears some consideration of at least removal of her regional disease. The chances for cure are less, primarily because of the extent of her axillary involvement.

DOCTOR BOGARDUS: But would the resection be in a curative attempt?

DOCTOR GREENFIELD: Yes, it would be a curative attempt. I think that she needs a radical mastectomy in order to accomplish even a palliative resection on her because she would need resection of her pectorals. I think the statistical likelihood of cure is not favorable.

DOCTOR BOGARDUS: How far does the tumor have to extend for a radical mastectomy to no longer be considered a curative type of treatment?

DOCTOR GREENFIELD: Well, if it gets below the deep aspect of the pectoral fascia and onto the chest wall, then obviously a radical mastectomy will not provide a cure. I think the fact that she has her disease limited at the present time to breast tissue plus what appears superficially to be axillary node involvement, would make her still a candidate for a radical mastectomy. I am surprised that she does not have extension to her supraclavicular nodes.

DOCTOR BOGARDUS: I could not feel anything definite or distinct there, but many times these nodes will be involved and you still cannot detect them clinically. Doctor

McClellan, could you tell us what the biopsy shows?

DOCTOR McCLELLAN: The needle biopsy of the breast mass shows a moderately well-differentiated infiltrating ductal carcinoma.

DOCTOR BOGARDUS: I take it then that the surgeons would really be in favor of treating her at least primarily with a radical mastectomy. This carcinoma may very well respond to radiation therapy also. I think that this would be an alternative method of treating her. She could be treated with tangential fields in and around the entire breast and chest area. If there is residual tumor, then follow this with a simple mastectomy later. This is an alternative way of taking care of this problem with statistically good results.

PRESENTER: This tumor apparently is not as highly anaplastic as we thought it was. In fact, Doctor McClellan, you said it was moderately well-differentiated, is that right?

DOCTOR McCLELLAN: Yes.

PRESENTER: It is my understanding that the so-called inflammatory carcinomas that respond to radiation therapy are usually anaplastic types.

DOCTOR BOGARDUS: Inflammatory carcinoma does not do well with radiation therapy because of the mode of spread. Were this an inflammatory carcinoma, which really, I think, is a clinical diagnosis as much as anything, then I would be opposed to treating it at all. These tumors spread very rapidly and respond very poorly to radiation therapy. I think that what we see in this patient is a mild degree of inflammation around the cancer, but not a true, clinical, inflammatory carcinoma. Considering the cell type and the clinical appearance of the patient, she could be treated primarily with radiation therapy. I offer this as an alternative to doing surgery on her.

DOCTOR GREENFIELD: From the bulk of the tumor mass and location, I wonder, in my own mind, how appropriate radiation therapy might be now, considering the fact that she might need radiation therapy after the removal of her tumor mass. It might be more helpful to reserve it for this area until later.



DOCTOR BOGARDUS: If we treat her now we would treat her through and through, and treat the entire tumor area with one complete series of treatments to a tumorcidal dose. Any recurrence would be handled surgically. It would come out about the same as treating her surgically, and then taking care of the recurrences post-surgery. I think the odds of her survival would be roughly the same either way you do it. Radiation therapy is made more difficult following surgery because of the skin grafts and other problems to contend with, such as poorly oxygenated tissue due to compromised blood supply.

PRESENTER: What about a trial of rapid radiation therapy, 1800-2000 rads tumor dose within two weeks and then deciding whether or not the tumor responds ten days after that.

DOCTOR BOGARDUS: No, I do not think that this would be a good method of treating this woman. I have seen this done in the past in other places, and I do not like the response. You put in just enough radiation to make it impossible to treat the area adequately later, but you don't put in enough radiation to do a lot of good in the initial treatment. I think that when you are dealing with cancer you either treat it all the way initially or you treat it all the way post-operatively, but a half-way type of treatment is not particularly satisfactory. The other alternative to this would be as we have done on a number of other preoperative conditions: We could treat her in a rapid pre-operative fashion, operate her immediately, and then follow this with further radiation therapy. In other words, split her treatment with surgery in the middle. I would be in favor of doing that, but not a trial of therapy to see what happens.

DOCTOR GREENFIELD: I think that many surgeons have come to the realization that for palliation where there is disease outside the immediate region, radiation offers a great advantage in terms of reducing bulk in the tumor mass, but in this woman with disease limited to the region that could be resected, we would encourage an opportunity for a cure with radical surgery.

DOCTOR BOGARDUS: The other alternative that I just mentioned though, would be to treat her in a preoperative fashion, op-

erate her immediately and then continue with the postoperative radiation therapy to finish the course of treatment.

DOCTOR GREENFIELD: I think that there may be a good reason for trying it on this patient since her dermal lymphatics are involved in an area that would make it particularly difficult for us to get an adequate skin margin high in her axilla.

DOCTOR BOGARDUS: The preoperative and postoperative treatment has one big advantage in that we are able to treat the tumor before the surgeon manipulates the cancer to any great extent, so you will be dealing with a tumor that is basically non-viable when you start your surgery. It also gives us the advantage that we have only half the amount of treatment to put in post-operatively when the patient has poor oxygenation as well as skin grafts to consider.

DOCTOR CHANES: Would the surgical resection be the same regardless of the response to radiation therapy?

DOCTOR BOGARDUS: Right. She would have a radical mastectomy either way.

PRESENTER: What do you anticipate as the response of this axillary mass? Do you think that it will ulcerate?

DOCTOR BOGARDUS: No. She still has skin over the surface of it and unless it breaks down within the week I do not think that it will break down at all. Once the patient gets a response to irradiation, she will start getting tumor reabsorption and the tension will be taken off the skin and quite often these will regress without ever breaking through. We have treated many tumors which were just on the verge of rupturing the skin, and if the skin is able to remain viable for a few days they go ahead and heal without ever having broken through.

*FINAL DIAGNOSIS:* Large, moderately well-differentiated ductal carcinoma of the left breast.

*TUMOR CLINIC RECOMMENDATIONS:* Although three methods of treatment were discussed, the majority seemed to favor a split course of radiation therapy and a radical mastectomy, following soon after the first half of the radiation therapy. Alternative methods discussed were radical mastectomy followed by radiation therapy or primary curative radiation therapy to the



lesion. Selection of the specific mode of therapy was left to the managing service.

CASE No. 12: Adenocarcinoma of the Breast with Metastases

**PRESENTATION:** The patient is a 43-year-old Caucasian female, who was in good health until approximately six months ago when she noted a "knot" in her right breast. She chose to do nothing about it at the time and about one month ago she developed some pain in her left shoulder. She saw several physicians for this, each of whom treated her for bursitis. Finally, about four days prior to admission, she saw another physician who examined her and found a large right breast mass. He also x-rayed her shoulder and demonstrated a pathological fracture of her left clavicle. He referred her to this hospital for further work-up and treatment. The patient states that she has had no pain with the breast mass, but that in the last month it has undergone a very rapid growth. There have been no skin changes on the breast associated with this. She has noted no lymphadenopathy or swelling. There has been, in the past week, some change in her right nipple. Her menstrual periods are irregular and she states that there has been no change in them. Her family history is interesting only in that she had a son who died of an ependymoma. On physical examination the patient is a well-developed, well-nourished obese white female, who is in no distress. Her blood pressure is 140/90, pulse 80 and regular, and respiration about 16 per minute. Pertinent findings include spider angiomas on her chest, a four by two cm axillary node which is firm, non-tender and apparently not fixed. There is evidence of a fractured clavicle on the left, which is very tender and some displacement was palpable. Her right breast has a large mass occupying the entire superior aspect. It is firm, non-tender and is not fixed to the chest wall, but apparently is fixed to the skin. There is no evidence of skin change or erythema over the mass; however, the nipple is slightly retracted. Her abdomen is obese, but there are no palpable masses. She has a grade two of six systolic ejection murmur which is heard best along the left

sternal border. Chest x-rays are negative but her mammograms are positive for a large mass in the right breast and a smaller mass in the left breast, which could not be palpated. Her radiographic survey reveals numerous metastases. She has the pathological fracture in her left clavicle, a metastasis in her humerus, some involvement of her lower spine, and generally she has lesions scattered throughout the skeleton. A liver scan, which was done yesterday, revealed some filling defects in her liver. Her laboratory test results are not all back yet, but all are negative to date. We do not have any liver function test reports. A needle biopsy of the breast was reported as showing adenocarcinoma of the breast.

**DOCTOR BOGARDUS:** Doctor Williams, would you care to make some comments on this particular situation?

**DOCTOR WILLIAMS:** I think the primary lesion inoperable unless at some point we could be helpful in avoiding ulceration in this local situation. Probably step number one is an oophorectomy.

**DOCTOR BOGARDUS:** Doctor Bottomley, do you have any comments as to management of this case by chemotherapy or hormonal manipulation?

**DOCTOR BOTTOMLEY:** The main problem is that she has liver metastases, which may make the oophorectomy less effective than it might be otherwise. We usually recommend oophorectomy as the therapy of choice in pre-menopausal women with metastatic breast cancer. This procedure will give a 30 to 40 percent remission rate in this group of patients. If the patient has liver metastases, however, we have had very poor results with attempting to treat the patient by hormonal means. On the other hand, 5-Fluorouracil will give approximately a 30 to 35 percent remission rate in patients with carcinoma of the breast even when it is metastatic to the liver. I feel that the patient should first have an oophorectomy and then later be treated with 5-Fluorouracil. Another problem is what to do about the local lesion. I think this is up to surgery and radiation therapy; however, if she gets a good response from her oophorectomy and chemotherapy this lesion ought to be controlled along with the others. If she does not respond it may eventually produce prob-



lems. Her primary problem will be her liver and bony metastases. The breast lesion does not seem to be in any likelihood of ulcerating. You could probably put off doing something with it until it presents a problem.

DOCTOR BOGARDUS: It is interesting that a lesion with this degree of metastatic disease and a lesion this large still is not out through the skin. I think it still remains relatively well localized in the breast. She has skin fixation, but it is not through the skin. As far as radiation therapy is concerned, it probably should be used on the collapsing vertebra even though you may want to remove the ovaries or use 5-Fluorouracil. She would probably go ahead and collapse that vertebral body before these procedures had a therapeutic effect and so it would be advisable to treat her now.

DOCTOR BOTTOMLEY: What about the clavicle; would you treat that too?

DOCTOR BOGARDUS: It is going to become a problem as to which bones ought to be treated. If the clavicle is giving her a lot of pain we should treat it.

DOCTOR BOTTOMLEY: Is it going to heal without treatment?

DOCTOR BOGARDUS: No, it is not going to heal. Our problem here is going to be treating multiple lesions because she has a lesion in her left femoral head which is going to have to be treated prophylactically

before she fractures it. The left humerus should be treated, the collapsing vertebral body should be, and while we are treating these, we could probably treat the clavicle too. After a while it becomes impractical, as you end up treating more of the patient than is compatible with her continuing survival.

DOCTOR WILLIAMS: But if she should get a good response to oophorectomy, it would not be rare to have those lesions recalcify.

DOCTOR BOGARDUS: This could very well be. We could temporize and hold off on other areas. The same is true of the lesion in her right breast. If this shrinks well with the oophorectomy then fine. If it does not, then I think she would come to one of two situations: either surgical removal with a simple mastectomy or radiation therapy to the breast. Probably radiation therapy would be the simplest, especially if we are treating other areas too.

*FINAL DIAGNOSIS:* Carcinoma of the breast with a large local lesion, skeletal and hepatic metastases.

*TUMOR CLINIC RECOMMENDATIONS:* Initial therapy to consist of an oophorectomy followed by palliative radiation therapy to selected skeletal lesions and then chemotherapy with 5-Fluorouracil to attempt to control the hepatic metastases. □

## OSMA VOTES AGAINST CHANGE IN MEDICARE POLICY

The Oklahoma State Medical Association, a member of the U.S. Chamber of Commerce, cast ten votes against the Chamber's proposal to change its current policy of total opposition to Medicare. It was proposed in a national referendum, that the Chamber could strengthen its voice in Congress on this issue by adopting a more neutral stand. However, the OSMA Board of Trustees believes that the principle of providing tax-paid benefits to many well-to-do citizens remains morally wrong, and further that opposition to the concept of Medicare does not disenfranchise the U.S. Chamber of Commerce from presenting effective testimony before Congress regarding constructive amendments to Medicare.



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## Business Highlights Of the 1969 Annual Meeting

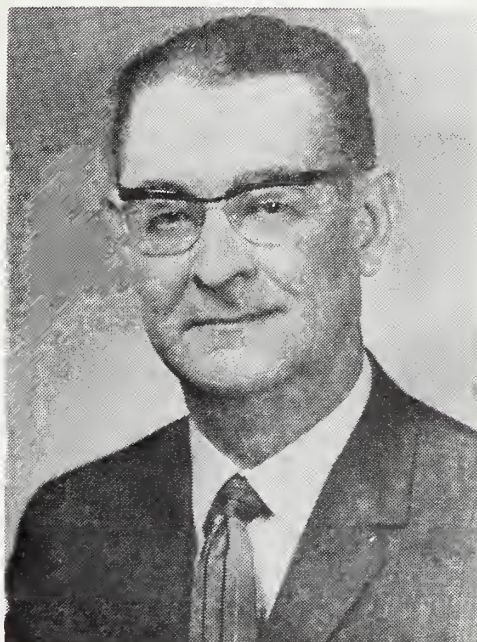
The OSMA House of Delegates met in its regular annual meeting on Friday morning, May 16th and Saturday morning, May 17th, to consider the past year's business of the association and to lay plans for the coming year. Election of new officers and reports from various association committees and councils were given prime consideration.

During the House meeting on Saturday morning, Hillard E. Denyer, M.D., Bartlesville, was recognized as president of the association for 1969-70, and was installed that evening at the Inaugural Banquet. He replaces Scott Hendren, M.D., Oklahoma City. Doctor Denyer was chosen president-elect of the association during the May, 1968 meeting in Oklahoma City.

Ed L. Calhoon, M.D., Beaver, was chosen president-elect of the OSMA and will serve one year in that position before assuming the office of presidency at the next annual meeting in 1970. Edward K. Norfleet, M.D., Tulsa, was re-elected to the office of vice-president and Malcom E. Phelps, M.D., El Reno was re-elected to the office of AMA Delegate. Thomas C. Points, M.D., Oklahoma City, was re-elected as Doctor Phelps' alternate AMA Delegate.

The OSMA Board of Trustees held its annual meeting on Thursday, May 15th, to consider recommendations to the House of Delegates and choose a new chairman of the Board. Sam Turner, M.D., Tulsa, had served three consecutive terms as chairman, the limit as provided by OSMA bylaws. C. Riley Strong, M.D., El Reno, was chosen as the new Board Chairman, and Marvin K. Margo, M.D., Oklahoma City, was named vice-chairman of the Board.

During the two days, the House of Delegates considered 13 OSMA committee and council reports, seven



HILLARD E. DENYER, M.D.

resolutions, and reports from the Board of Trustees, President and Secretary-Treasurer.

The complete proceedings will be printed in the July issue of *The Journal*. Meanwhile, some of the principal actions are summarized below:

- Delegates received a report that \$22,250 has been issued to OU freshmen since 1962 in the form of scholarships for academic achievement and \$43,050 has been loaned to 99 medical students. A study was requested regarding discontinuation of the scholarship program in favor of using all available funds for loans.

- After three years of attempting to update the constitutions and bylaws of county medical societies, the Delegates recommended that the 11 county societies not responding to date be rechartered on the assumption that their documents are not in conflict with the OSMA's, and that any conflicts be resolved in favor of the state association's governing rules.

- More formalized relations with the OU Chapter of the Student Amer-

ican Medical Association was requested under the auspices of the association's Medical School Liaison Committee.

- The House of Delegates officially commended the Oklahoma State Medical Assistants Society as an organization whose mission is to more effectively serve as doctor's aides, and learned about the medical assistants' successful project to improve their proficiency by establishing two-year associate arts degree programs at the junior college level.

- The OSMA Council on Professional Education was instructed to remain active in planning and conducting scientific education programs for state physicians and to seek communicative innovations to improve the quality of instruction and the quantity of participating physicians.

- After hearing reports from the Planning Committee, the Secretary-Treasurer, and the Appropriations and Audit Committee, the House of Delegates voted to increase annual OSMA dues from \$75.00 to \$100.00, effective January 1st, 1970. The cost of expanding the association's headquarters building, necessary salary increases, a decline in advertising revenue of the *OSMA Journal*, growing operational costs in the face of increased activities and inflation, and a predicted budgetary deficit for the current organizational year were cited as reasons for the increase.

- A total membership count of 2,103 was reported by the Board of Trustees, 2,078 of which are considered to be active members.

- Delegates approved a resolution from the Pontotoc County Medical Society requiring a referendum of the entire membership as to whether the association should amend its bylaws to provide for voluntary rather than

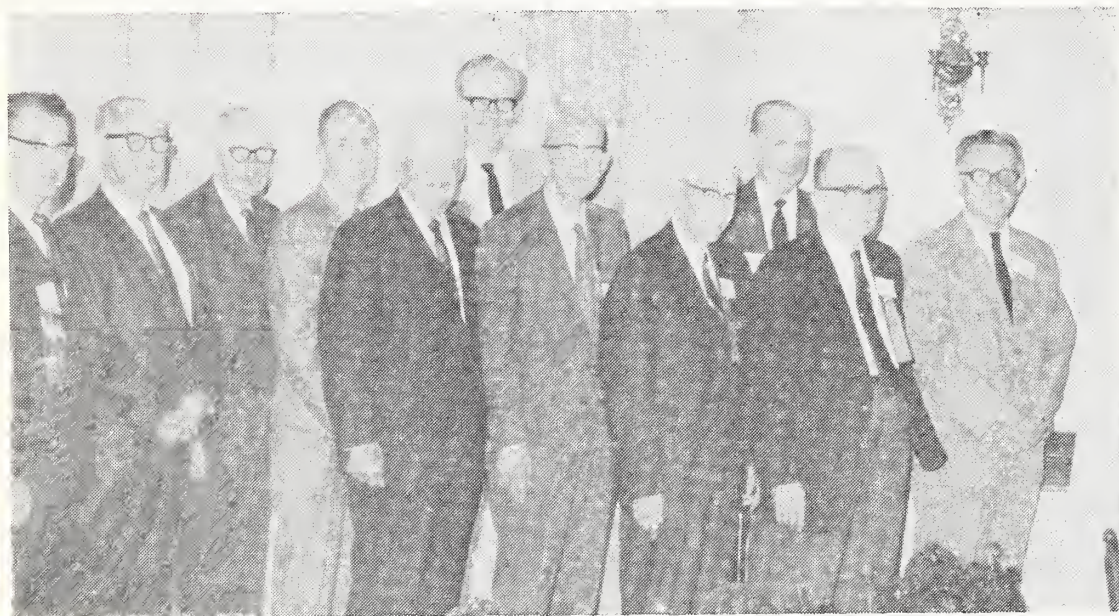
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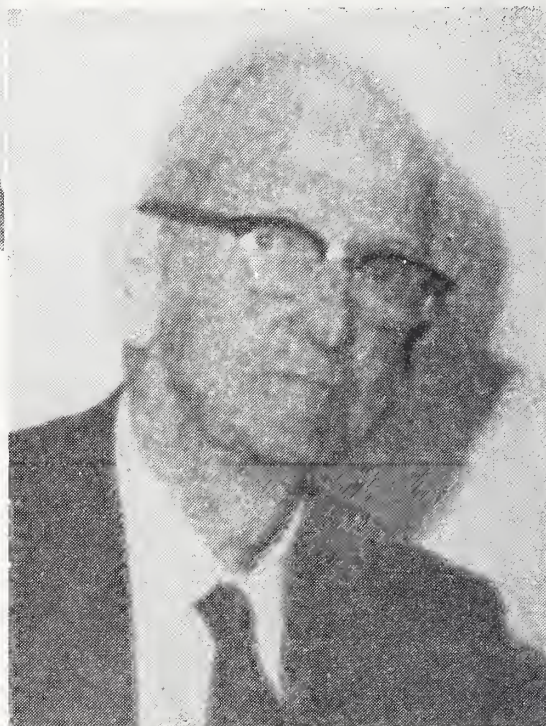
OSMA officers and newly elected officers are pictured above (left to right): Stanley R. McCampbell, M.D., Secretary-Treasurer, Oklahoma City; C. L. Tefertiller, M.D., Trustee, District XIV, Altus; Robert J. Hogue, M.D., Alternate Trustee, District III, Guthrie; Thomas C. Points, M.D., Alternate Delegate to the AMA, Oklahoma City; C. Riley Strong, M.D., Chairman of the Board of Trustees, El Reno; Malcom E. Phelps, M.D., Delegate to the AMA, El Reno; Edward W. Allensworth, M.D., Alternate Trustee, District I, Vinita; Edward K. Norfleet, M.D., Vice-President, Tulsa; Thomas E. Rhea, M.D., Trustee, District XI, Idabel; Edward L. Calhoon, M.D., President-Elect, Beaver; Hillard E. Denyer, M.D., President, Bartlesville; John A. McIntyre, M.D., Trustee, District III, Enid; and C. M. Hodgson, M.D., Speaker of the House of Delegates, Kingfisher.

Scott Hendren, M.D., out-going President of the OSMA, is shown below presenting James L. Dennis, M.D., Vice-President and Director of the OU Medical School, with a check for \$8,302.53 from AMA-ERF.



Pictured above are those who attended the Past-President's Breakfast held May 17th. They were (left to right) Hillard E. Denyer, M.D., OSMA President-Elect, Bartlesville; Joe L. Duer, M.D., Woodward; John F. Burton, M.D., Oklahoma City; Harlan Thomas, M.D., Tulsa; Paul B. Champlin, M.D., Enid; Maxwell A. Johnson, M.D., Tulsa; Henry K. Speed, M.D., Sayre; George H. Garrison, M.D., Oklahoma City; Scott Hendren, M.D., OSMA President, Oklahoma City; Clinton Gallaher, M.D., Shawnee; and Walter E. Brown, M.D., Tulsa.

Henry K. Speed, M.D., (below) OSMA Past-President from Sayre, was given a standing ovation by the House of Delegates when it was pointed out that he had attended 44 of the last 45 annual meetings.

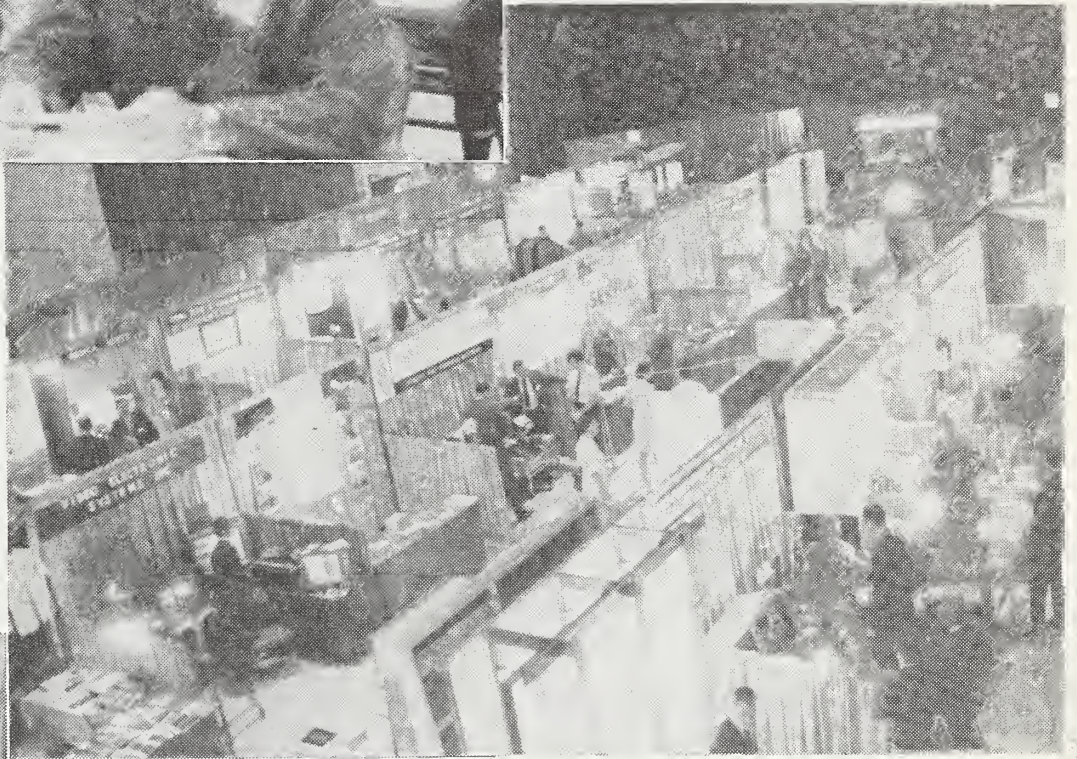






Nearly a full representation of the House of Delegates (left) attended the business meetings of the body on May 16th and 17th.

Right, all of the available booth space was sold to 79 exhibitors who gave their support in making the meeting a success.



Free picnic luncheons (left) attracted over 500 physicians and exhibitors on Friday and Saturday.

The aisles of exhibit areas (right) were filled during intermissions between scientific sections.





Continued from page 261  
compulsory membership in the American Medical Association. The ballot, which will be mailed prior to August 1st, will be accompanied by pro and con statements in order to assist members in casting informed votes. The results of the referendum will be tabulated by the Executive Committee and will be made available for the guidance of the House of Delegates.

- A resolution authored by Doctors Walter E. Brown and Don H. O'Donoghue, chairmen of medical advisory committees to the Department of Public Welfare, was approved by the House of Delegates with slight modification. As approved, it calls for the continued operation of the Medicaid and Crippled Children's programs under the principle of free choice of physician, and for payment for services to be continued under the "usual, customary and reasonable" fee concept.

- In general keeping with the policy of the AMA, the Delegates modified the existing policy regarding professional association with osteopaths. Medical doctors are now permitted to ethically associate with certain osteopaths who, in the judgment of the individual medical doctor, practice according to scientific principles and are ethically acceptable. However, the Delegates accepted for study only several other AMA suggestions, including one to invite osteopaths to belong to the OSMA.

- Decrying the dearth of new drug products released for use in 1968 (only 87) under present Food and Drug Administration regulations and controls, the Delegates approved the intent of bills now pending Congressional action which would establish a 15-member evaluation board of biochemical experts to be appointed by the President of the United States. The resolution is being submitted to the AMA for consideration.

- At the recommendation of the OSMA Governmental Relations Committee, the Delegates: (1) Reiterated a 1966 policy which requires govern-

ment agencies to pay the market value for health services, and further stipulated that Oklahoma's Congressional Delegation be contacted regarding the OSMA position in relationship to current reports that reduced fee schedules are now being contemplated by federal officials; (2) Authorized a special meeting of the House of Delegates to consider the OSMA reaction to any reduction in allowances under government health programs; and, (3) Requested that Oklahoma's Congressional Delegation be contacted regarding federal regulations which prohibit the sharing of information between carriers of governmental health programs to the extent that "customary fee" programs are operating in Oklahoma under different methodologies, resulting in disparities of payments for identical medical services.

- A medical review panel to help adjudicate Workmen's Compensation cases where there is a divergence of medical testimony as to the extent of disability was approved on recommendation of the OSMA Occupational Medicine Committee. □

## Annual Meeting— Success!

Nearly 1,000 Oklahoma physicians attended the 63rd annual meeting of the OSMA held May 15th-17th in Tulsa's Assembly Center. According to Annual Meeting Chairman Lucien M. Pascucci, M.D., Tulsa, the meeting was a success by any standard.

Continuing their medical education, the physicians supplied large audiences for all 14 scientific section meetings. Both meetings of the House of Delegates and the reference committees were well attended by physicians interested in the business of the association.

Three major entertainment functions were held in Tulsa. The free oyster crack on Thursday evening attracted over 500 physicians and wives while the Gaslight party on Friday evening was attended by 300 persons. The Annual Inaugural Dinner-Dance, held in the Mayo Hotel's Crystal Ballroom, hosted 300 physicians, wives, guest speakers and

visiting dignitaries.

Hillard E. Denyer, M.D., Bartlesville, was installed as the association's 63rd president, succeeding Scott Hendren, M.D., Oklahoma City. Ed L. Calhoon, M.D., Beaver, was elected president-elect of the OSMA, and Mrs. J. Hartwell Dunn of Oklahoma City was inaugurated as president of the OSMA Woman's Auxiliary. She will be succeeded next year by Mrs. William M. Leebron of Elk City.

During the dinner-dance, trophies for the OSMA tennis tournament and golf tournament were presented. Bill Stout, M.D., Oklahoma City, took the trophy for the singles tennis tournament and Stanley R. McCampbell, M.D., Oklahoma City, teamed up with Lanny Anderson, M.D., Oklahoma City, to take the doubles trophy. The golf tournament trophy was won for the second year in a row by Lawrence E. Silvey, M.D., of Bethany.

Free picnic luncheons were held again this year on the stage of the Tulsa Assembly Center and attracted over 500 people on Friday and Saturday noon.

Nearly 90 scientific and commercial-pharmaceutical displays were set up in the exhibit hall during the meeting and were staffed by 320 exhibit personnel during the three days.

Highlight of the exhibit area was the doctor's hobby and flower show featuring the diversified hobbies and pastimes of Oklahoma physicians. □

## Committee Reports On Penal Institutions

A special committee of OSMA members has submitted a report on Penal Medical Services and Facilities to the State Board of Corrections. The investigation was requested by the Board, state authority for corrective institutions, and resulted in a report containing numerous recommendations. Donald Cooper, M.D., Stillwater, Chairman of the committee, stated that "... a significant finding of the committee is that the incarcerated people in Oklahoma are receiving good medical care. We found certain areas that could be improved and have so rec-



commended to the Board, but basically the services and facilities are adequate, which is commendable, when you consider the circumstances under which a prison medical director works." Russell H. Walker, M.D., is Director of Medical Services at McAlester and is responsible for the health care of all Oklahoma prisoners.

The committee met on numerous occasions with members of the State Board of Corrections, prison officials, the medical director and members of the Oklahoma Medical Research Commission. The facilities at McAlester (women's and men's prison), Stringtown and the Medical Research Building were toured by committee members.

"The research facilities at McAlester are outstanding," said Doctor Cooper, "and it was the unanimous opinion of the committee that they be utilized in connection with the prison's health program. We also recommended that the prison hospital at McAlester be improved so that the majority of care can be rendered

inside the prison walls. We feel there are obvious hazards in trying to transfer prisoners to outside health institutions and feel that improved facilities will attract more local physicians to assist the medical director of the prison."

"We found this responsibility to be a challenging opportunity," voiced Cooper. "There are some very unique aspects to caring for confined people. The committee worked hard and spent many hours before agreeing on the final report. I feel they should be congratulated for a fine job."

Other recommendations made by the committee include: A diagnostic workup prior to or soon after entrance into the prison: Long range goal of complete psychological and psychiatric testing; Additional nurses; Non inmate secretarial help; Specialty consultation; Specialty assistance from local physicians; Additional medical corpsmen; and Expanded psychiatric facilities.

The report was delivered to the Board the first week in June. □

## Malpractice Prevention Program Underway

When Pacific Employers Group became the official OSMA liability insurance carrier through its parent company, the Insurance Company of North America, INA and the OSMA entered into an agreement which called for a malpractice prevention program to be jointly sponsored by the two organizations.

The primary tool for this program has now been prepared. In the near future all physicians in Oklahoma will receive a copy of a booklet entitled "Professional Liability Medical-Legal Guide for Physicians." This booklet was prepared by the OSMA and published by INA. It was designed primarily to give physicians information that will help them prevent malpractice claims.

The 32-page booklet contains information on the insurance company,

### Premium Dividend Declared

At a time when physicians from many states are having difficulty obtaining professional liability coverage at any price, the unique OSMA-sponsored program will reward some 900 physician-participants with a total premium dividend of \$24,889.71. The dividend feature—part of a contract between the association and the company—contains a clause which provides for annual dividends based upon favorable loss experience. Dividend checks, representing ten percent of the earned premium during 1968, will be mailed to individual physicians during June. □

## Tennis Tournament Winners Announced



Twenty-eight tennis playing physicians faced the elements in order to participate in the annual OSMA Tennis Tournament held in conjunction with the OSMA meeting in Tulsa. Despite rainy weather, racket wielding doctors played down to the finals.

Bill Stout, M.D., Oklahoma City defeated Lanny Anderson, M.D., Oklahoma City, in the singles finals,

6-3, 6-3. In doubles play, Doctor Anderson teamed up with Stanley R. McCampbell, M.D., Oklahoma City, to defeat Doctor Stout and Carlton E. Smith, M.D., Henryetta, 6-2, 2-6, 7-5.

Pictured above (left to right) are: Hugh Perry, Jr., M.D., Tulsa; Floyd F. Miller, M.D., Tulsa; Doctor Anderson; Doctor Stout; Doctor Smith; and Doctor McCampbell. □

the reporting of occurrences or incidents, and brief discussions on important doctrines of law that are used in medical malpractice cases. In addition there is a two page "Malpractice Prophylaxis" which contains rules of thumb for a physician and his staff to follow that will help forestall the possibility of a malpractice suit.

Half of the booklet is devoted to medical-legal forms that may be commonly used by physicians in medical practice. This section con-



tains numerous consent and release forms for the more common situations where they are needed and a series of form letters to be used by the physician.

During the summer months the OSMA staff will attempt to set up meetings with each county medical society in order to present a full program on malpractice prevention for all physicians. These programs will be carried out from September through December. The booklet will be the basis of the programs and all physicians are urged to read the booklet as soon as they receive it in the mail, and to retain it as a permanent reference item for office use.

Legislation designed to enhance the defence of malpractice suits is being studied by the OSMA Legislative Committee in cooperation with the insurance company's defense counsel. □

## New Regional Library Services Now Available

To improve information services to all health professionals in the State is the purpose of the new Regional Library Services Project of Oklahoma Regional Medical Program, a federally supported program which achieved operational status on May 1st, 1969.

Surveys of hospital library resources in Oklahoma made in 1966 by Mr. Leonard Eddy, Librarian of the University of Oklahoma Medical Center, and in 1967 by Mrs. Patricia Smith, Coordinator of Library and Information Services, Oklahoma Regional Medical Program, indicated that most of these libraries are small, understaffed collections. The Regional Library and Information Services Project will assist the local hospital in improving the services available in its library, and at the same time offer back-up services using the resources of the 70,000 volume Library of the University of Oklahoma Medical Center.

Strengthening of local libraries will be accomplished, first, through

a series of training workshops for hospital library personnel. The first such workshop was held on May 5th in the University of Oklahoma Medical Center. Twenty-two hospital librarians attended this first workshop, and, since the May 5th session, librarians from other hospitals in the State have indicated their interest in attending future sessions. Any person responsible for the library in his local hospital is invited and encouraged to attend these training sessions.

Consultation services will be available from Mrs. Patricia Smith for those wishing to improve their local hospital library. Special assistance is available in book selection for the small hospital library.

Back-up services from the University of Oklahoma Medical Center Library are available to any health professional in Oklahoma. He may call or write the Regional Library Services Unit in the University of Oklahoma Medical Center Library directly, or he may submit his requests through his local hospital librarian. His request may be for a specific article in a particular journal, or it may be for several articles on a particular subject. Most frequently, photocopies of relevant articles will be mailed to the health professional, but, when appropriate, the book or journal will be loaned from the Medical Center Library. The first 30 copies supplied in response to a request will be given free of charge; if a request exceeds 30 copies, the health professional will be charged for these additional copies, at 10 cents per page. A professional librarian will perform this reference service.

Rapid service, ideally within 24 hours after receipt of request, is a goal of the Regional Library Services Unit. Night and week-end calls for information will be received by a Code-a-phone and these requests filled at the beginning of the next working day.

The Regional Library Services Unit is designed to improve the flow of relevant, recent information to health professionals throughout the State, to assist them in making dif-

ficult patient-related decisions and in increasing the effectiveness of their own continuing education endeavors.

Any health professional interested in receiving this reference service is invited to call or write: Mrs. Patricia Smith, Coordinator of Library and Information Services, University of Oklahoma Medical Center Library, 801 N.E. 13th Street, Oklahoma City, Oklahoma 73104. Phone: (405) 232-5656. □

## Bird, Merrill Receive Regents' Awards

Robert M. Bird, M.D., and James A. Merrill, M.D., this spring became the first members of the University of Oklahoma School of Medicine faculty to receive Regents' Awards for Superior Teaching.

Until this year only main campus faculty members could be nominated for the awards, made on the basis of nominations from academic departments with final selections by a committee from the Board of Regents.

Doctors Bird and Merrill were among six presented the citations at the spring general faculty meeting on the Norman campus. Other recipients are in the fields of modern languages, zoology, chemistry and English.

Doctor Bird is professor of medicine and physiology and associate dean of planning and development. Doctor Merrill is professor and head of the Department of Gynecology and Obstetrics.

Each Regents' award winner receives a merit salary increase of at least \$500 in the fiscal year following his selection, and his name is added to a plaque on display in Bizzell Memorial Library on the Norman campus.

Doctor Bird, governor-elect of the American College of Physicians for the state of Oklahoma, is a graduate of the University of Virginia Medical School. He joined the OU faculty in 1952.

Doctor Merrill, a faculty member since 1961, earned his M.D. at the University of California School of Medicine, San Francisco. □





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### OSMA Mexican Fishing Tour

Twenty-three Oklahoma physicians will have the opportunity of tackling giant black bass September 18th-21st during the OSMA Mexican Fishing tour at Lake Novillo, Sonora, Mexico.

A charter flight has been arranged to leave Oklahoma City at 5:30 a.m., on September 18th, arriving at one of the world's best bass lakes in time for an afternoon of fishing. The plane, a DC-3, was recently purchased from Frontier Airlines.

Fishing will continue all day Friday and Saturday and a half-day on Sunday before the return flight.

The tour, priced at approximately \$260 (depending on the number par-

ticipating), features air fare, food, lodging and a motor boat (two to a boat). Physicians need only to bring their own tackle and an ice chest to bring home the catch.

Lake Novillo is noted for its abundance of largemouth bass; the fish typically range from three to seven pounds, and a serious fisherman can stay quite busy trying to land them.

A \$50.00 deposit is required to hold a reservation for the trip. For complete information, write to the OSMA, P.O. Box 18696, Oklahoma City, 73118. Early inquiries are requested, since the airplane will accommodate only 23, and since a number of reservations have already been made. □

### Blue Cross-Blue Shield Announce Benefits Changes

Blue Cross and Blue Shield have announced changes in their regular local contracts which will be instituted beginning July 1st.

The Non-Group membership will be changed to the new program in July, August and September.

The changes will be made effective for a large segment of the Group membership on July 1st, 1969, and for another large segment, January 1st, 1970. Changes for the remaining Group members having regular local coverage will be made on their renewal dates throughout the coming year.

Blue Shield Benefits for in-hospital medical care will be increased as follows:

Plan 400—\$7.00 per day, first

through 15th day, then \$5.00 per day, 16th through 120th day.

Plan 300—\$5.00 per day, first through 15th day, then \$4.00 per day, 16th through 120th day. (Present allowances available for 30 days, beginning on fourth day.)

Benefits for in-hospital medical care for nervous and mental cases will be increased to 30 days, providing 15 days at \$7.00 or \$5.00 and 15 days at \$5.00 or \$4.00. (Present allowances for 30 days, beginning on fourth day.)

Patients admitted to hospitals under Blue Cross coverage will benefit by similar expansions.

Regular and obstetrical days of care will be increased to 120. □

The present non-member hospital benefit of \$10 per day will be expanded to include 50 percent of ancillary charges in non-member hospitals of Oklahoma.

Under the new program, local merit-rated groups of under 100 will have the option of selecting room indemnity allowances ranging from \$20 to \$42, with commensurate increases in dues.

The semi-private contract will no longer be available to non-group members under the new program. However, they too will have the option of selecting room indemnity programs ranging from \$20 to \$42 with appropriate rate increases. The \$10 and \$14 room indemnity contracts will be abandoned and the \$25 deductible will be removed.

The Blue Shield benefit changes were approved by the Blue Shield Board of Trustees, which also authorized expansion of the Board to include three members of the dental profession and three more public representatives.

This action was taken to make possible the establishment of a Dental Prepayment Program in Oklahoma under Blue Shield administration.

The Board now consists of 24 members, 12 of whom represent the lay public; nine of whom represent the Medical profession and three the Dentistry profession.

The newly-elected Trustees are: Dan E. Brannin, D.D.S., Tulsa; Charles Kuria, D.D.S., Chelsea; Donald E. Oxford, D.D.S., Oklahoma City; Ed L. Calhoon, M.D., Beaver; Mark D. Holcomb, M.D., Enid; Raymond Crews, Oklahoma City; E. M. (Jim) Lookabaugh, Oklahoma City; Homer Z. Goatcher, Mannford; and Edwin Wienecke, Tulsa.

Doctors Calhoon and Holcomb replace physician representatives E. M. Gullatt, M.D., and Avery B. Wight, M.D., who resigned. Retiring public representatives Paul W. Davis and Albert M. Donnell were replaced by Wienecke and Lookabaugh.

E. T. Harrison, Oklahoma City; and Walter O'Bannon, Jr., Tulsa, were re-elected chairman and vice chairman of the Board, respectively. □



## Tulsa Teen-ager Wins Top AMA Honor



Cathy Jennemann, Tulsa high school junior, is shown being congratulated by Milford O. Rouse, M.D., immediate past-president of the AMA, for having won the top award in the basic medical sciences during the 20th International Science Fair in Fort Worth, Texas.

A 16-year-old Tulsa girl, Cathy Jennemann, a junior at Monte Cassino High School, was named one of the two top winners of the awards presented at the 20th International Science Fair May 5th-9th in Fort Worth, Texas.

She was selected by a team of judges from the AMA Council on Scientific Assembly for her exhibit on "Possible Deafness From Everyday Noise," entered as a finalist from the Tulsa County Science Fair. Her co-winner is Greg Kauffman, also a junior and 16, from Albuquerque, New Mexico, High School. His exhibit is entitled "Pyelonephritic Recurrence."

They were named at the annual AMA-hosted Health Awards Banquet by Milford O. Rouse, M.D., Dallas, immediate past AMA president. They were selected from a field of 391 contestants from regional, state and

foreign science fairs in 46 states, the District of Columbia, Canada, Germany, Japan, Peru, Puerto Rico, Sweden and Switzerland.

In addition to their citations, Miss Jennemann and Mr. Kauffman will be the honored guests of the AMA at its 118th Annual Convention in New York City July 13th-17th and they will present their studies in the Scientific Exhibit in the Coliseum.

Miss Jennemann's exhibit illustrates experiments which show that temporary deafness results from exposure to loud noises, such as from rock bands, radio, vacuum cleaners, and expressway traffic; such exposure probably results after continued intensity in permanent deafness.

Her father, Vincent F. Jennemann, is a geophysicist and the family residence is at 203 Sunset Drive, Tulsa 74114. □

## Regional Medical Program Receives \$1.25 Million Grant

A grant of \$1,258,378 has been made to the Oklahoma Regional Medical Program by the Division of Regional Medical Programs, Department of Health, Education and Welfare. The grant is for a period of one year beginning in May, 1969.

The National Advisory Council for Regional Medical Programs has approved continuing allocations of approximately the same amount for a second year, and for a slightly smaller amount in the third grant year.

ORMP has engaged in planning activities for approximately two and one-half years. The University of Oklahoma Medical Center serves as a coordinating agency for this program involving private and public institutions and organizations in a joint effort to improve medical care in Oklahoma. The Oklahoma State Medical Association is among the participants along with the Oklahoma Heart Association, Oklahoma Division of the American Cancer Society, the Oklahoma Tuberculosis and Respiratory Association and more than 40 hospitals throughout the state.

ORMP is one of 55 programs in the United States which stem from health legislation passed by the 89th Congress in 1965. The so-called "Heart Disease, Cancer, Stroke and Related Diseases Act"—known as Public Law 89-239—was designed to make the advances of medical research more widely available for clinical application.

Nine proposed projects have been designed by ORMP and were approved for funding by the Department of HEW. The specific projects are:

- Coronary Care Project whereby large hospitals with coronary care units will monitor coronary patients via leased telephone lines at one or more smaller hospitals.

- A pulmonary emphysema project which will reach throughout the state to bring to Oklahoma communities the latest knowledge and tech-



niques in early diagnosis and treatment of this major disease.

- A joint project of the Inter-agency council on smoking and health in cooperation with ORMP will be a statewide program to emphasize the hazards of smoking and its relation to heart disease, cancer, strokes and the other related diseases.

- An education and demonstration project to improve early diagnosis and treatment of cancer of the breast. Mammography will be a major feature.

- An urology screening, education and demonstration project with special emphasis on the early diagnosis and treatment of cancer of the prostate.

- A Tulsa cancer control project, involving the cooperative efforts of the major hospitals will be aimed at not only early diagnosis and detection of cancer of all types, but also will be a pilot project for automated tumor data. The purpose of these modern methods of data gathering, storing, retrieving and disseminating tumor information is to improve patient care through a systematic and continuing evaluation of results.

- A pilot project for a continuing education program for the Enid area will demonstrate the value of a large hospital serving ten other hospitals as a center of continuing education of health personnel. Electronic teaching aids will be utilized.

- A library and information service project based at the Library of the University of Oklahoma Medical Center will initially serve libraries in Tulsa and Enid. The project will provide health professionals the latest medical information and expedite the availability of documents, articles, digests, etc. to those in need of fast and reliable reference services.

- A nutrition project is designed to provide all health professionals with the latest information concerning the importance of nutrition in treatment of heart disease, cancer, stroke, and related diseases such as diabetes and emphysema. □

## DEATH

JOHN W. PENDLETON, M.D.  
1889-1969

A long-time, Kingfisher physician died May 5th, 1969, in Oklahoma City. Doctor Pendleton was born in Vernon, Texas in 1889, and graduated from the Fort Worth School of Medicine in 1912. His practice was established in Kingfisher in 1915.

Active in medical as well as civic affairs, Doctor Pendleton served as mayor of Kingfisher for 28 years. In 1962, the Oklahoma State Medical Association honored Doctor Pendleton with the presentation of an Honorary-Life Membership in recognition of his dedicated service to humanity. □

## BOOK REVIEWS

### RENAL DISEASE IN CHILDHOOD.

By John A. James, M.D., Professor of Pediatrics, University of Southern California School of Medicine, Los Angeles, California. Cloth, 371 pp., Saint Louis: The C. V. Mosby Company, 1968. \$18.50.

The author states the purpose of this book is to serve as a concise, practical guide for pediatricians, urologists, general practitioners and house staff who may be called on to care for children with renal diseases. Diagnosis and treatment are emphasized more than etiology, pathology or pathogenesis. The book admirably fulfills the author's objectives in many areas, but falls down in certain other areas.

The strongest features of this publication are the six chapters covering the major medical renal disorders of childhood: urinary tract infections, acute glomerulonephritis, chronic glomerulonephritis, nephrotic syndrome, acute renal failure, and chronic renal failure. These chapters are informative, pertinent, contain a great deal of practical information, and are of value to the student and clinician alike. The early chapters dealing with embryology, anatomy, physiology, signs and symptoms, diagnostic procedures, and renal function and diseases of the newborn, are of some usefulness to students. Two chapters seemingly of less value are: renal complications of systemic diseases; and miscellaneous disorders of the kidney and urinary tract. Abbreviated attempts to cover a myriad of disorders

under these two headings do not do justice to the individual entities. For example, the renal tubular disorders are compressed into seven pages, and the end result will add little to the reader's understanding of these uncommon but perplexing disorders. Yet the author devotes an entire (admittedly short) chapter to a historical perspective of the evolution of classification of glomerulonephritis. It would seem that such space should have been devoted to a more detailed account of the less common renal disorders in a book which emphasizes diagnosis and treatment.

There are minor errors present (e.g., metabolic disorders are a rare cause of stone formation in children; corticosteroid therapy is associated with nephrocalcinosis but not nephrolithiasis, etc.) but this type of inaccuracy is present in all books.

The strong point of this welcome publication is that it is an authoritative guide to the diagnosis and management of the common renal disorders of children. The author's philosophy of treatment of diseases of children is especially valuable. This book can be unreservedly recommended for medical students, house staff, general practitioners, pediatricians, urologists and other clinicians who treat children. Due to a lack of comprehensiveness, nephrophiles will not find it as valuable. It is hoped that the next edition will be expanded, particularly in the area of the less common renal disorders.—James E. Wenzl, M.D.



**PRACTICAL PSYCHIATRY FOR THE INTERNIST.** By Douglas Goldman, M.D., Chairman, Dept. of Psychiatry, Good Samaritan Hospital, Cincinnati, Ohio; Assistant clinical professor, Dept. of Psychiatry, University of Cincinnati College of Medicine, Cincinnati, Ohio; and George A. Ulett, M.D., Ph.D., director, Mo. Div. of Mental Diseases; professor of Psychiatry and Chairman, Dept. of Psychiatry, Univ. of Mo. School of Medicine, Missouri Institute of Psychiatry, St. Louis, Mo. First edition, cloth, 156 pp., St. Louis: The C. V. Mosby Company, 1968. \$9.85.

The authors' stated goals are to increase the confidence of practitioners in dealing with:

"... The emotional and psychological manifestations of the illnesses of their patients and thus to ... encourage the acquisition of practical working experience ...". Both the title and the size of the book clearly preclude any assumption that this is meant then as a comprehensive text in the area of psychiatry and medicine. For those looking in this direction, other texts are available.<sup>1, 2</sup>

The authors have instead attempted the very difficult task of briefly and without "psychiatric jargon" covering a variety of areas germane to their title, such as psychiatric aspects of surgical practice, psychosomatics, psychiatric disorders, etc. The book is clearly and competently written. Some important emotional forces within individuals that are difficult to conceptualize in common sense terms, e.g., castration anxiety, are in fact presented just so. Often their most significant points are made in their well-chosen, concise, crisp clinical examples which make for pleasant and informative reading.

The chapter on general principles of treatment in psychiatry is clear and realistic, emphasizing the educational, cathartic and ventilatory aspect of psychotherapy. A more comprehensive, excellent text on this topic, old but not dated is *Psy-*

*chotherapy in Medical Practice* by Levine,<sup>3</sup> for those readers who are interested in this area.

The section on psychotropic drugs is admirably complete, yet concise, as one might expect with Doctor Goldman's extensive clinical and research experience with these agents. Some caution for the reader however: the authors tend to be sanguine about psychotropic drugs in general and gloss over other experts' reservations, as well as some significant side effects of these agents. Examples of this include: their enthusiasm re antidepressants, which in fact, only have at most a 65 percent significant improvement rate;<sup>4</sup> the unsubstantiated claim that imipramine combined with electroconvulsive therapy will accelerate improvement; the omission of the agranulocytosis or hepatic toxicity of the antidepressants; their insufficient circumspection regarding the use of monoamineoxidase inhibitors by those not thoroughly familiar with their significant toxicity as well as synergism with alpha methyl dopa<sup>5</sup> and insulin;<sup>6</sup> the omission of the danger of antidepressants precipitating closed angle glaucoma; the antagonism of tricyclic antidepressants and guanethidine sulphate (Ismalin).<sup>7</sup>

The chapter on the physician is a useful one, pursuing as it does the crucial emotional aspects of medical practice and the physician-patient relationship. These are topics on which excellent treatises have been written;<sup>8</sup> but this chapter, within its space limitations, introduces the subject well.

The final section on the family physician and community mental health reveals in its title the more general appeal that the authors hope this text will have, i.e., all non-psychiatrist physicians. It is also a timely and important addition, for across the country and very much here in Oklahoma, that community mental health centers therefore, promise hope along with problems for the public and physicians.

A book this brief on a subject this broad could not hope to satisfy any

one reader as to thoroughness or emphasis. I would have liked to see a more thorough exposition of the problem of sexual deviation, an area in which there is considerable ignorance. A section on psychiatric emergencies including, in particular, advice on crisis intervention and suicide prevention for the non-psychiatrist would have been valuable. The problem of hallucinogens is a current and future one for physicians throughout the country, but is lacking in this book. Citing omissions like these would be unfair if the book did not include the extravagance of a chapter on hypnosis; understandable perhaps when one notes that this is a topic about which Doctor Ulett is expert and experienced.

There are, of course, some other minor objections about management of certain problems mentioned which is inevitable in any treatise on clinical issues. These are not serious.

In general, if one is seeking a brief practical guide on the psychiatric aspects of medical practice, this would be a useful and up-to-date text.—*Thomas N. Rusk, M.D.* □

1. Lief, H. I., Lief, V. F., and Lief, N. R.: *The Psychological Basis of Medical Practice*. Hoeber Medical Division, Harper & Row, New York, 1963.

2. Freedman, A. M. and Kaplan, H. I.: *Comprehensive Textbook of Psychiatry*. The Williams & Wilkins Co., Baltimore, 1967.

3. Levine, M.: *Psychotherapy in Medical Practice*. The MacMillan Co., New York, 1942.

4. Lehmann, H. E.: Clinical Perspectives on Antidepressant Therapy. *American Journal Psychiatry* 124: 12-21, 1968.

5. Caffey, E. M., Hollister, L. E., et al: Medical Bulletin—11, Veterans Administration, Department of Medicine and Surgery, September 1966.

6. Cooper, A. J. and Ashcroft, G.: Potentiation of Insulin Hypoglycemia by M.A.O.I. Antidepressant Drugs. *Lancet* 1: 407-409, 1966.

7. Mitchell, J. R., et al: Antagonism of the Antihypertensive Action of Guanethidine Sulphate by Desipramine Hydrochloride, *Journal AMA* 202: 973-976, 1967.

8. Balint, M.: *The Doctor, His Patient and the Illness*. International Universities Press, Inc., New York, 1957.

**MANAGEMENT OF EMOTIONAL DISORDERS IN PEDIATRIC PRACTICE.** By Jerome L. Schulman, M.D., Professor of Pediatrics and Professor of Psychiatry and Neurology, Northwestern University Medical School; Head, Division of Child Psychiatry, Children's Memorial Hospital, Chicago, Illinois. 307 pp., Chicago: Yearbook



Medical Publishers, Inc., 1967. \$9.50.

The author, Head of the Division of Child Psychiatry at the Children's Memorial Hospital, Chicago, states in the preface that this book was written specifically for the practicing pediatrician and it is the author's goal to provide practical help to the pediatrician; to provide the kind of material that has proved useful in actual experience.

This book would have to be considered controversial if not confusing in some aspects. For example, in the opening paragraph it is stated "it is not necessary to understand any personality therapy to its ultimate depths in order to deal effectively with emotional problems." The book is divided into ten chapters plus a section of annotated bibliography. He enlists the aid of four colleagues in authoring various sections. The third chapter is entitled "Special Behavioral Syndrome" and discusses such problems as school phobia, early infantile autism and others. However, some of the more common behavioral manifestations such as enuresis are not covered. The chapter on "Chronic Handicapping Illness in Children" is much stronger. A third of the book is devoted to annotated examples of interviewing, both good and bad. It also includes several chapters on the psychological aspects of hospitalization, psychological evaluation of children and evaluation of language function in children.

The author, whose grasp of the subject indeed is excellent, presents a rather eloquent plea for involvement by the pediatrician in the life affairs of the patients in terms to which no one can object. However, Doctor Schulman tends to leave his area of unquestioned competence to offer ideas and solutions to achieving rapport between physicians, parent or child. The author tends to ignore the fact that a community also exists which can offer many resources to the pediatric patient.

It is difficult to write a useful book for practicing pediatricians on the

management of emotional disorders. The average pediatrician sees an unbelievable spectrum of children with unsatisfactory patterns of personality maturation. He often is forced to rush into family situations where many child psychiatrists would fear to tread, even after being armed with cautious and complete evaluation.

Pediatricians will find much of value in this book but will not agree with all of the proposals and approaches.—*H. D. Riley, Jr., M.D.*

**BRAY'S CLINICAL LABORATORY METHODS.** J. B. Bauer, M.D., Assistant Professor of Pathology, Washington University School of Medicine; P. G. Ackermann, Ph.D., Research Associate, Reproductive Biology Research Foundation; and G. Toro, Ph.D., Research Associate, Reproductive Biology Research Foundation, St. Louis, Missouri. Seventh edition. Cloth, 764 pp., with 174 illustrations and 16 color plates. St. Louis: The C. V. Mosby Company, 1968. \$14.85.

This revised edition presents with impressive clarity a comprehensive, yet refreshingly concise description of clinical laboratory methods. It should serve admirably toward closing the knowledge and communication gap that too often exists between the clinician and his essential laboratory support.

Organization is superb, and well supported by a detailed index. Besides sections which one would expect in such a volume, there are stimulating descriptions of quality control procedures, as well as principles and techniques involved in colorimetry, spectrophotometry, fluorometry, electrophoresis, chromatography, and automation. Sections have been set aside for methods of enzyme study and toxicological analysis.

Impressive to the reader is the style of presentation of items, first by outlining the significance of the procedure, followed by the details of the method, and finally a lucid paragraph giving normal values and interpretations.

Illustrations are adequate. Tables

and graphs clarify many clinical and laboratory differentiations. A table of normal values is appended. References are plentiful and of recent origin. The cited references could be of more value if the titles were included.

Assurance that the superior sagittal sinus is a safe location for obtaining blood in infants was disturbing as was the description of a femoral puncture technique which involves striking the underlying osseous structures. Perhaps such gross methods of securing blood samples will be recognized as archaic in light of the microanalytic methods recommended.

This volume is highly recommended to acquaint students, technicians, and clinicians with important advances in this massively expanding specialty.—*R. Lee Austin, M.D.*

**HISTORY OF THE AMERICAN PEDIATRIC SOCIETY 1887-1965.** By Harold Kniest Faber, M.D., and Rustin McIntosh, M.D., Emeritus members and former presidents of the Society. 375 pp. New York: McGraw-Hill Book Company, Blakiston Division, 1966. \$14.50.

In recording the history of the prestigious 80-year-old American Pediatric Society, the authors have, in addition, written a valuable and delightful history of American pediatrics. They have painstakingly reviewed the transactions of the Society's meetings which include thousands of papers in original form or in abstract and by presenting the most important developments in chronological order have skillfully presented a panorama of pediatrics. The book is made more valuable by the author's ability to place facts and opinions as presented at Society meetings in context. The fact that both authors have played prominent roles in the Society through the years has allowed them further to provide many fascinating footnotes and "side comments."

For anyone interested in a history of American pediatrics, this is a very readable and valuable edition.—*H. D. Riley, Jr., M.D.* □



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**References:** 1. Vernier, R. L., in Patient Care Feature: *Patient Care*, 1:20 (Feb.) 1967. 2. Beeson, P. B.: "The Infectious Diseases," in Beeson, P. B., and McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Philadelphia, W. B. Saunders Company, 1967, p. 230.

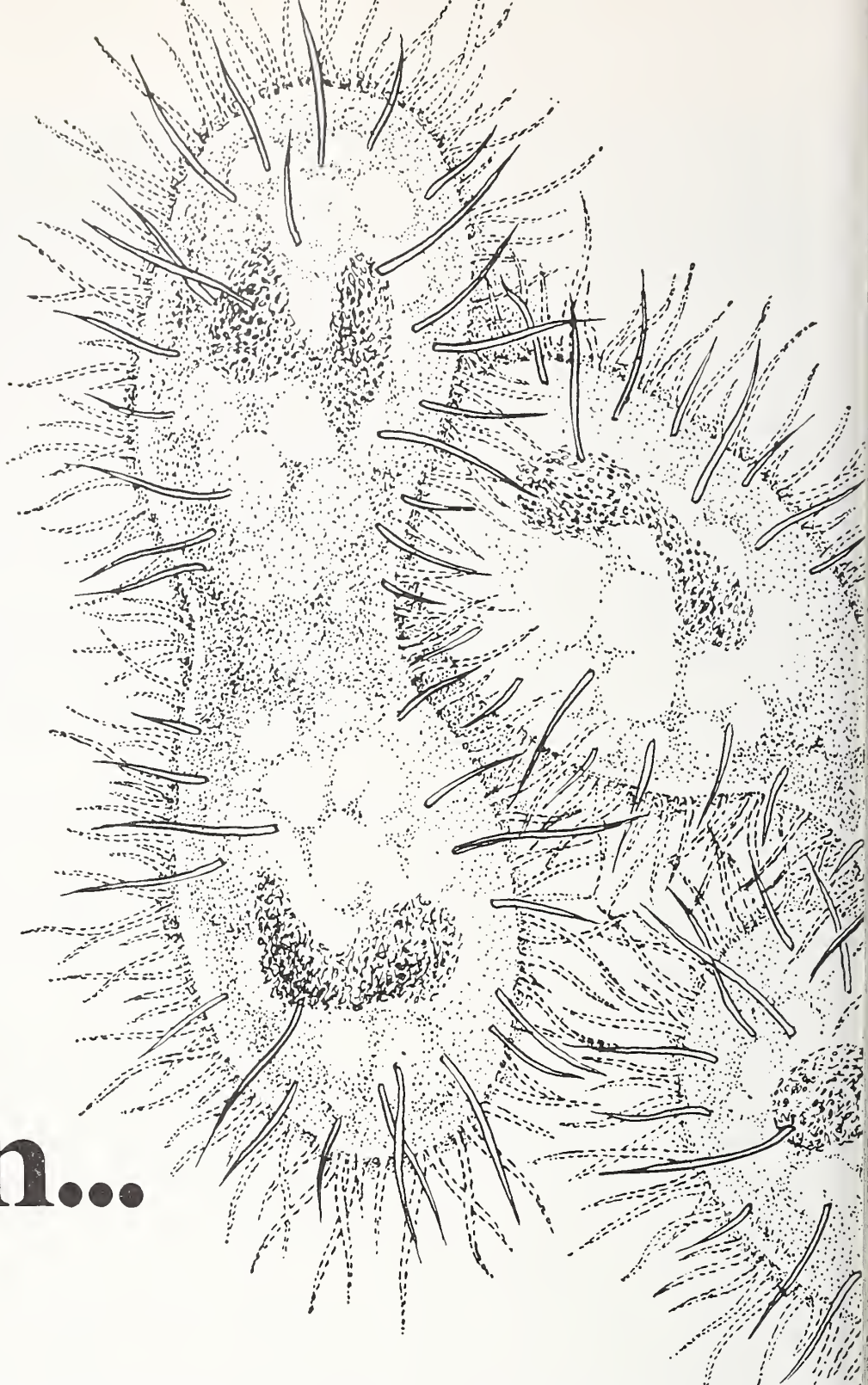
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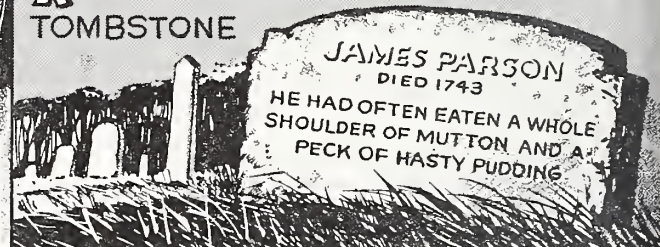
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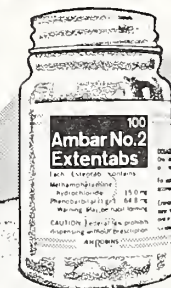
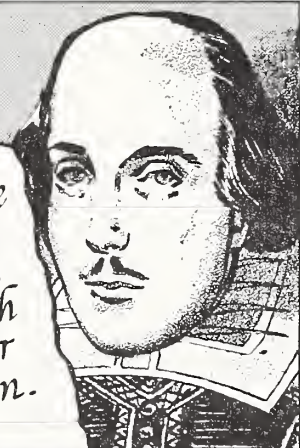
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## Medicarithmetic

ANOTHER "new math" has made its appearance in our society. It is infinitely more difficult to understand than any of its bewildering predecessors. It is a vague pseudoscience that has something to do with numbers and nothing to do with logic. It is a subject studied by thousands of frustrated students but taught by no one. It emerged from the efforts of a body of bureaucrats struggling to prove that the impossible is possible. With their marvelous discovery of "Medicarithmetic" came an inexhaustible array of magic formulas which could, with the greatest facility, solve every problem, answer every question, accomplish every task and achieve the impossible.

One magic formula converts professional medical care from a personal service to a public utility so that patients become subscribers, physicians become vendors and diagnoses become endorsements on receipts.

Another formula equalizes the medical needs of all patients with all disorders; a five-minute hospital visit from the physician who has eight other patients in the same hospital (and whose home and office are two blocks away) becomes remuneratively equal to a 30-minute visit from another physician who travels ten miles through heavy traffic to reach the hospital where he has but one patient.

Still another magic formula equalizes the time and effort expended by all physicians in the care of all patients in a given community. Differences in overhead-costs disappear and the care rendered 20 patients per day by one physician and three nurses is compensated at the same rate as the care rendered 50 patients per day by another physician working with one nurse.

There is also a formula which makes it possible for a physician to treat a seriously ill patient with three anxious and question-

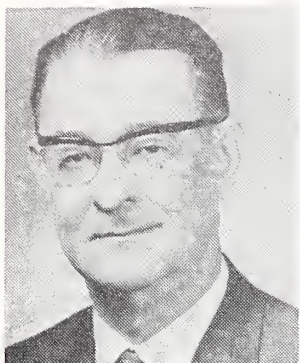
ing relatives in constant attendance as easily and as quickly as he treats a patient with a minor illness whose family stays at home.

Of all the magic "Medicarithmetic" formulas, certainly the most magnificent is the one which always makes everything come out right. The "out-right" formula provides a pre-determined result for any given numerical function and automatically adjusts the numbers to insure the accuracy of the result. For example, say the answer to a problem is ten; if the numerical function is addition and the true numbers are nine and six, this "out-right" formula changes the numbers to eight and two or five and five or six and four. As applied, the formula works this way: If 100 patient visits per unit of time are predicted by The Great Planners and it turns out that 150 visits are made, the "out-right" formula is applied, it is determined that there has been "out-right" over-utilization, the public is chastised and The Great Planners are exonerated. If predicted costs were ten million dollars for a particular period and the actual costs amount to eighteen million dollars, the "out-right" formula is applied, the "vendors" are accused of "out-right" fraud, duly exposed and publicly condemned, once again exonerating The Great Planners. The absolute sovereignty of the "out-right" formula guarantees an unchallenged downward adjustment of fees and patient-visits so that the actual results become identical with those predicted.

Most mysterious of all the formulas is the one which expands the utilization of our already overburdened medical resources, improves the quality of medical care and multiplies the number of professionally trained people without providing new facilities, training more people or making the profession more attractive.

If none of this makes sense to you, it's only because you have an orthodox mind, blighted with logic and totally inexperienced in "Medicarithmetic."—M.R.J. □





Not the least of the pressing problems of organized medicine is the fragmentation of the profession into more than 20 recognized specialties.

Although improved quality care to the individual patient has resulted, the cohesion of spirit, the unity of purpose, the delineation of goals have suffered.

Our planning committee has just completed its first step in confronting this problem. With members of the committee, reinforced by officers and staff of the OSMA as discussion leaders and resource individuals, 46 representatives of 18 specialty classifications have spent a full day of discussion of common problems, seeking meaningful solutions.

The conclusions of these discussion groups will be utilized by the planning committee which will bring them to us for suggested implementation.

Obvious at once to those present was the importance for each physician to reaffirm active support and participation in his county medical society and through it, the Okla-

homa State Medical Association and the AMA.

A vital point of the discussion was the need for thoughtful and active liaison between the association and the specialty groups. This could be accomplished best, it was felt, by a chosen representative of the specialty classification.

One suggestion, which dealt with future planning, involved representation of these groups in the House of Delegates as non-voting members. However, the consensus was divided on this point.

Additionally, some of these organizations were interested in an arrangement where OSMA would provide them with staff service. A questionnaire, which would establish certain guidelines for this staff service, was distributed, and the results will be returned to the planning committee for guidance.

We must remember that aside from our primary interest we share common goals and aspirations. We are *physicians*, first and last.

These early discussions and those to follow may be landmarks. We can all be proud of the counsel and direction being pointed out for us to follow and grateful to these dedicated colleagues who have taken their time to provide them.

Sincerely yours,

*Willard E. Denyer*



## Birth Defects—Importance and Recent Clinical Advances

R. LEE AUSTIN, M.D.

HARRIS D. RILEY, JR., M.D.

*Defects of the central nervous system are frequently serious and present difficult problems relating to judgment and long-term management. Children with meningomyelocele and hydrocephalus demand prompt management and careful team approach that can only be performed by an informed, interested, and empathetic group.*

### *Definition and Scope of Problem:*

Abnormal conditions of congenital origin are a leading cause of death and disability. In the United States an estimated 500,000 fetal deaths and about 62,000 deaths among live-born infants are associated with birth defects each year.<sup>1</sup> Diseases of the circulatory system claim the distinction of being the greatest cause of death, and this is widely advertised. Most of such deaths occur in older individuals whose productivity has been realized. Many people do not realize that birth defects rank a close second. When

the actual loss of life expectancy and productivity are considered, these disorders present an even more notable cause of tragedy. For example, an estimated 15 million persons have one or more birth defects which affect their daily lives.<sup>1</sup>

A birth defect may be defined as a structural or metabolic disorder, present at birth, which may be caused by either hereditary or environmental influences during embryonic or fetal life. They should be clearly distinguished from *birth injuries* by which is meant damage to the infant during the process of delivery.

Recently advanced programs have stressed the problems associated with stroke, heart disease and cancer. Because of the heavier toll in relation to future years, birth defects should receive increasing attention and support.

It is estimated that one to two percent of infants have anomalies which are detectable at birth. Because of lack of early signs and symptoms, many defects escape early detection; consequently, the incidence of defects increases to approximately four percent by five years of age, and to as much as seven percent by adolescence.<sup>2</sup> These defects are the leading cause of death in infancy. They are exceeded only by accidents as a cause of disability throughout childhood.<sup>3</sup>

Because of the medical importance of congenital malformations, the Clinical Study Center for Birth Defects, supported by The

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National Foundation, was established at the Children's Memorial Hospital, University of Oklahoma. It is the purpose of this communication, in addition to reviewing certain recent advances concerning birth defects, to describe some of the activities of the Center.

*Case Detection Methods:*

Changes in the form of birth certificates, requiring additional information regarding the various events surrounding pregnancy and delivery, have made available useful statistics regarding birth defects. With presently available data, many influences capable of producing disruption or alteration in fetal development may now be analyzed as to the importance of their effect. The importance of prompt registration of defects and analysis of data to serve as an early warning system is obvious.<sup>4</sup> Had such information been available for scrutiny during the thalidomide catastrophe of 1960, the epidemic would have been identified within five months of the birth of the first affected baby.

Improved diagnostic methods such as radiological techniques, amino acid determinations, chromosomal analyses and virus isolations have enhanced case findings of birth defects. Increased professional and lay interest and education combined with establishment of corrective or remedial procedures have stimulated increased efforts in detection of congenital anomalies.

*Causes and Mechanisms:*

The causes of malformations are "multitudinous and complex."<sup>5</sup> Although much investigation has been pursued, knowledge is inadequate at best. Although the search for teratogenic agents has been extensive, few agents have actually been incriminated in the human subject. The agents which have been identified, however, serve to remind us that the fetus is not insulated from the external environment, and that defects associated with such agents, with few exceptions, are preventable. However, these teratogens produce only about one percent of all structural malfunctions. Radiological exposure, therapeutic or atomic, the infections such as rubella and toxoplasmosis, drugs such as thalidomide and anti-folic acid compounds, and progestin hormones have been incrimi-

nated in the production of anomalies.<sup>6</sup> It should be more universally appreciated that the period during which environmental agents may significantly influence the developing fetus is limited to the first eight to twelve weeks after conception.<sup>7</sup> Many substances which have produced deformities in animals have not proved to be teratogenic in humans. Furthermore, an agent which has been demonstrated to have harmful effects on the human fetus does not produce malfunctions in every exposed embryo. The reasons for these findings are unclear. Genetic inheritance of defects, dominant or recessive conditions, account for less than ten percent of recognized defects in the human newborn. Approximately 65 percent of products of spontaneous abortions have major chromosomal abnormalities.<sup>8</sup> Most defects are associated with no specific causative factor. The matter is further complicated by the fact that for a given anomaly there are varied causes; it is frequently impossible to detect, from the end result, what combination of events or toxins has been responsible for the abnormality.

Events which have been associated with an increased incidence of congenital malfunctions without identifying the specific mechanism include:

- (1) Maternal age under 20 years or over 35 years.<sup>9</sup>
- (2) Presence of a single umbilical artery.<sup>10</sup>
- (3) The adopted child.<sup>11</sup>
- (4) Illegitimate births.<sup>12</sup>
- (5) Prematurity.

Other environmental influences include geographical factors, seasonal variations, social class differences, increased paternal age, and variations with parity. Boys have been found to have a 6:5 incidence over girls, and the white to non-white ratio is 2:1.

The mechanisms concerned in the development of malformations have been described<sup>8</sup> as follows:

- (1) Developmental arrest
- (2) Agenesis or aplasia
- (3) Hyperplasia
- (4) Aberrant development
- (5) Failure of normal degeneration
- (6) Degeneration of normal structure

*Types of Malfunctions:*

Over 1,000 birth defects have been de-



scribed. These range from mild to severe and involve all organ systems. Inborn errors of metabolism due to enzymatic deficiencies are being recognized with increasing frequency. Lethal anomalies most commonly involve the central nervous system. Congenital heart disease is of somewhat less importance as to incidence, with anomalies of the genitourinary and gastrointestinal tract being of about equal importance thereafter. *Prevention and Therapeutic Approach:*

Various influences and events during this century have resulted in a significant reduction in the importance of infectious diseases as lethal agents,<sup>13</sup> but much less has been accomplished in the management of birth defects. Certainly prevention is the key to solving the overwhelming problem but few effective measures are available at this time.

Within this year the availability of an effective and safe rubella vaccine is anticipated. It is hoped that the production of immunity against this agent in young females will put an end to the congenital rubella syndrome which has added some 20 to 30,000 severe anomalies during epidemic years. These children are most commonly afflicted with deafness, eye defects, microcephaly, and congenital heart disease, but frequently all organ systems are involved.<sup>14, 15</sup>

The administration of serum containing

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high Rh antibody, thereby preventing Rh sensitization in the Rh-negative mother, offers real hope for decreasing the incidence of erythroblastosis.<sup>16</sup>

Effective public health measures appear to prevent defects. Mothers in low-income areas have about twice the incidence of premature babies<sup>17, 18</sup> and the incidence of birth defects in these babies born before term is seven percent compared with 1.6 percent in full-term controls.<sup>19</sup> Babies of unwed mothers have a higher incidence of defects. Good prenatal care produces improved offspring but often women are not aware of pregnancy at the time when optimal care might prevent disastrous consequences. Powerful drugs, medicines, and narcotics must be avoided.<sup>20</sup> For many babies with various defects the establishment of intensive care facilities for newborns has become a life-saving influence. In the seven years since the establishment of one such facility the neonatal mortality rate decreased to about 11 per 1,000 live births, half the national average.<sup>21</sup>

#### CLINICAL STUDY CENTER FOR BIRTH DEFECTS

Because of the prime importance of congenital malformations, a Clinical Study Center for Birth Defects was established at the Children's Memorial Hospital, University of Oklahoma Medical Center in 1961. Because of their frequency and importance, particular attention has been given to patient care of infants and children with congenital defects of the central nervous system. A team approach is utilized in the care of infants and children with hydrocephalus and meningomyelocele. Studies by Merrill, *et al.*,<sup>22, 23</sup> have indicated that such an approach can produce an increase in the number of children who are competitive in society from 17 to 34 percent. Nulsen<sup>24</sup> reporting on 117 patients operated for hydrocephalus, has had more impressive results with a mortality rate of only 21 percent at the end of three years, no operative deaths and with 65 percent of the survivors being competitive (IQ more than 75) at the end of the three-year follow-up. Because of the frequency of meningomyelocele (one in 500 births) and of the frequent association of hydrocephalus (one in 500 births), a major objective of birth



defects centers is the optimal care and investigation of these children. Best results are obtained by close adherence to the following principles:

1) Realization that, at birth, prognosis regarding meningocele and hydrocephalus is most difficult even with maximal experience. A recent report<sup>25</sup> stresses that those infants expected to do well frequently die, whereas those whose future appears "hopeless" make surprising progress.

2) Early closure of the skin defects, which expose the subarachnoid space and central nervous system to infection, is necessary if any of the other corrective and supportive measures are to make any contribution. Thirty percent of newborns with meningocele have cerebrospinal fluid pleocytosis and/or bacterial infection of the meninges, even in the absence of any meningeal signs, seizures or systemic evidence of an infectious process.<sup>26</sup> Meningitis, when present, is almost always due to Gram-negative bacteria; the mortality rate is high (67 percent).<sup>27</sup> Prompt management of such infections is obviously essential in obtaining good results.

3) Over 80 percent of children with meningocele develop hydrocephalus.<sup>28</sup> Prompt shunting of the cerebrospinal fluid in order to relieve the increased pressure must be carried out in order to prevent irreversible damage,<sup>29</sup> but conversely infants who present with very thin cortical mantles may well survive with good cerebral function.<sup>30</sup> An important concept expressed by Bering<sup>31</sup> is that infants with hydrocephalus have an increase in brain tissue mass over normal controls.

In a controlled study of 40 infants reported from England in 1963,<sup>32</sup> it was pointed out that emergency closure of the meningocele is necessary. This procedure produced decreased mortality, decreased evidence of meningitis, and improved muscular function. Also, contrary to prevalent opinion, immediate closure did not increase the incidence of hydrocephalus.

The importance of careful early evaluation of the baby with meningocele along with increasing awareness of the great virtues of urgent operation on the first day of life in suitable cases as a means of pre-

venting future complications and improving survival has recently been advocated by Matson.<sup>33</sup>

Conflicting reports as to efficacy of oral osmotic agents in hydrocephalus have appeared.<sup>34, 35</sup> Hayden, *et al.*,<sup>36</sup> have recently reported encouraging results following the use of isosorbide.

After correction of the meningocele and shunting of the hydrocephalus, the problems are yet considerable due to infection in several sites:

A. *Local infection of the operative sites*, though frequent, presents few serious prolonged complications.

B. *Urinary infections* present major obstacles to survival. Lack of neurogenic control produces poor emptying, retention, infection and the changes of chronic pyelonephritis. Frequent cultures from suprapubic aspirates or mid-stream specimens obtained via Crede' procedures and subsequent adequate therapy can produce good results free of signs of chronic renal infection.<sup>22</sup> In some patients diversion of the urinary stream becomes necessary.<sup>37</sup>

C. *Detailed care* and attention to the ventriculo-atrial catheter is essential. Meticulous studies<sup>24, 29</sup> demonstrate that location of the atrial catheter tip at T-6 is associated with surprising freedom from ill effects, but that if the catheter tip is high at T-2 it frequently becomes non-functional due to obstruction. If the catheter tip is lower than T-7 the incidence of infection increases to 25 percent. The premise is now uttered "once a catheter, always a catheter." Certainly revision is frequently necessary as growth progresses in order that proper function continue and if prevention of brain damage from increased intracranial pressure is to be observed. Yearly roentgenograms demonstrate the position of the catheter tip. Avoidance of clogging in the ventricular catheter has recently been reported by the use of U-curved catheter tip with multiple holes only on the inside of the "U".<sup>29</sup>

Certainly the only acceptable solutions for these difficult problems lie in the realm of research seeking prevention, but as these patients are carefully followed and adequately managed, more knowledge becomes available



in the basic fields of genetics and fetal environment. Biochemical influences are explored. Soon definitive preventive measures may present themselves.

SUMMARY

Birth defects are the second leading cause of death in this country. Over 250,000 children per year are born with significant defects. The most serious congenital disorders are those involving the central nervous system. As preventive measures are sought, more careful and intelligent management of children with defects has increased the number of competitive children at least threefold within the past decade. Some of the important principles of care have been reviewed. □

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AMA NEWS CHANGES NAMES

The *AMA News* became the *American Medical News* during the first week in July. This weekly newspaper is published by the AMA and mailed to all U. S. physicians. Along with the new name, it has the new objective of carrying out the AMA Boards of Directives to give "Balanced treatment of any news of importance to medicine".



# The Diagnosis and Surgical Treatment of Acute Intracranial Hematoma

WILLIAM F. MEACHAM, M.D.

*Formation of clinically significant intracranial clots may materially detract from the recoverability of head injury. The ease with which such clots may now be diagnosed and surgically removed require their consideration in all head injury victims whose clinical progress is not entirely satisfactory.*

THE PRESENT high-speed vehicular age has thrust upon the medical profession the responsibility of attempting to repair the ravages of impact collisions which all too frequently result in death or permanent physical disability. In a problem of this sort it is rather futile to talk of prevention, since we all know that such a goal is impossible. We must accept, as a fait accompli, that thousands are to be killed or injured in increasing numbers, year after year, and that our best therapeutic efforts relate to the chance of cheating death of some of its intended victims, and of minimizing (and correcting) the disabling effects of bodily trauma. No longer should accident victims be left to the arbitrary decisions of the individual who happens to be caught "on call." To perform in

our best capacities in the arena of traumatology, we must insist that a certain degree of expertise must be possessed by those who make the responsible decisions. Indeed, this is a responsibility that should not be held by a single person, but shared by representatives of every specialty involved, and in a proper order and priority.

The human head, sitting atop a fairly flexible spine, is an excellent target, and every personal assailant knows this and takes aim accordingly. In traffic accidents, the head can bob about within the confines of the vehicle, striking first one object after another, until the action has completely decelerated. This often deprives the victim of a phenomenon we scarcely acknowledge until it is lost . . . consciousness. When this loss is transient, it is considered recoverable and termed "concussion." When prolonged, it can mean structural damage to brain parenchyma, or brain compression by an intruding factor, hemorrhage.

Except in infants, the size and capacity of the human skull is constant, consisting of brain, cerebrospinal fluid and blood. Only blood is variable in amount, and can be increased or diminished in volume. The other two items remain constant. If space is taken by any other object within this constant volume chamber, it must do so (acutely, at least) at the expense of blood in the capillary bed, resulting in some degree of local and generalized cerebral ischemia. This state of affairs, in turn, stimulates brain-vascular

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reflexes to bring additional blood into the calvarium to perfuse the anemic brain, resulting in an elevation of blood pressure and a more effective heart stroke volume (bradycardia). This rather sophomoric and teleological recounting of basic cerebral physiology must be understood by the traumatologist if he is to interpret properly the signals of danger in the victim with cranio-cerebral injury.

Intracranial bleeding, resulting in hematoma formation, is classically considered to be either extradural (arterial), subdural (venous) or intracerebral (either). Small hematomata may be tolerated well and present no clinical signs pointing to their presence. It is known that subdural hematomata may reach a considerable volume and ultimately disappear by gradual absorption. However, in these instances the hematoma is compensated for, and no evidence of brain tamponade exists. Those that jeopardize survival and recovery require detection and surgical removal while there is still an opportunity to anticipate a resumption of normal vascular cerebral perfusion.

The diagnosis of intracranial hematoma cannot be made with unfailing accuracy by neurological examination, and it is senseless to argue over the meaning of the presence or absence of a positive Babinski sign, reflex alterations, etc., on the basis of establishing a diagnosis of intracranial hematoma. Neither will an x-ray of the skull nor a lumbar puncture add to the establishment of an accurate diagnosis. It is more sensible to reason that if a patient shows progressive deterioration of consciousness, progressive pupillary dilatation, and signs of brain tam-

ponade, that it must be due to hemorrhage, or swelling or both. Only an arteriographic study or a direct look via burr openings will disclose the true picture. When a patient's condition is stable, he can be observed periodically, always suspecting a silent hematoma until recovery is obviously occurring. It should be considered axiomatic that returning consciousness is the most comforting neurologic sign under such circumstances.

It should be considered a travesty of modern clinical medicine that an injured patient succumbs because of an intracranial hematoma that was neither disclosed nor suspected. No longer is it necessary to agonize over the possible presence of a space-taking hematoma when the disclosure can be so easily made by arteriography techniques which do not disturb the intracranial pressure problem, can be carried out under local anesthesia and require no great technical skill or expertise in performance.

The use of the electroencephalogram and the echoencephalogram, while interesting and, at times, informative, will not supply sufficient definitive diagnostic information to be considered reliable. Like the x-ray of the skull and the lumbar puncture, they are, in acute situations, a waste of time. One of the tragedies of any emergency service is to learn of the death of a youngster with an epidural hematoma during the performance of neurological studies which had little or no chance of reconciling the diagnostic issue.

We can still benefit from the teachings of the ancients. Hippocratic methods and teachings recognized the importance of evacuation of blood from between the cranium and the dura if the patient was to survive, and Celsus knew that intracranial clots could occur in the absence of a skull fracture. Jean Louis Petit described the classical signs of extradural hemorrhage; loss of consciousness, a lucid period, and progressive coma, as indicative of cerebral compression. How many times have contemporary physicians failed to be alerted by this simple, but grave, chain of events? It is not known who first described the significance of pupillary dilatation in intracranial tamponade, but it remains one of the most pathognomonic signs of acute extradural hemorrhage and should never be ignored. When both pupils become

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dilated and fixed, respiratory arrest and death may be only minutes away.

Again, it should be emphasized that lumbar puncture adds little or nothing to the establishment of an intracranial hematoma. The presence or absence of blood in the cerebrospinal fluid does not mitigate for or against the presence of a hematoma. It is clinically useless to count the red blood cells in grossly bloody spinal fluid. To do so, according to a senior, respected neurosurgeon, is tantamount to counting the hairs on a rabbit to see if he is large or small!

The definitive treatment of acute intracranial hematoma is a complex of therapeutics that far exceeds the concept of dramatic "brain surgery." The objective of such treatment should always be the attempted restoration of altered intracranial and neural physiology, and to this end, the actual surgical technic employed is but one phase of this basic objective. It is not germane to discuss the various methods of neurosurgical technic that could be utilized in the removal of intracranial clots; neurosurgeons can, and do, argue over the relative merit of these particulars. I am content, however, with any method that enhances the recovery of altered physiological functions, and suffice it to say, the relief of acute brain tamponade is promoted, but not accomplished by the surgical

evacuation of the offending clot. There may be, and often is, microscopic hemorrhage in and beneath the cortex, cerebral swelling, venous distention, capillary ischemia, and large and small vessel spasm. By reducing intracranial pressure by clot removal, by the control of edema with steroids and dehydrating agents such as mannitol or urea, by insuring an adequate respiratory integrity, by maintaining an adequate blood volume and peripheral circulation, and by striving for an impeccable orderliness in fluid and electrolyte balance, we may then begin to hope that our patient will not only survive, but recover! These are the applications of principles, not recipes for treatment, and include only those things which all good physicians should instinctively employ. Nowhere is this more apropos than in the area of acute traumatology where decisions must be made in rapid sequence and judgments pronounced without benefit of long and costly deliberation.

Ambroise Pare (1517-1590) put it very neatly: "Five things are proper to the duty of a surgeon: to take away that which is superfluous; to restore to their places such things as are displaced; to separate those things which are joined together; to join those that are separated; and to supply the defects of nature." □

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## OVER-UTILIZATION: BRITAIN'S ANSWER

Great Britain has found a partial solution to the over-utilization problem created by the "something for nothing" philosophy. The British National Health Service reimposed a 30c charge on each prescription issued by the socialized doctors of that nation. Subsequently Britains asked for some 14 million fewer prescriptions in the first seven months after the labor government reimposed the charge. When labor came to power in 1964, prescription charge was aboiled. It was reinstated last June in wake of Britain's financial crisis.



# Cardioversion

BERNARD LOWN, M.D.\*

*Arrhythmics due to rapid heart action can now be instantly terminated by means of a carefully synchronized transthoracic D.C. shock—or cardioversion.*

## EDITORIAL COMMENT

*Those of us in the private practice of medicine realize the value of cardioversion for arrhythmia control. Restoration of sinus rhythm augments cardiac output by approximately one-third over that seen in atrial fibrillation. When a patient has incipient congestive failure the improvement in myocardial contraction is important.*

*The following article by Bernard Lown, M.D., describes the methodology for cardioversion. This procedure is safe and practical for the community hospital provided certain safeguards are met. Prophylactic anti-arrhythmic medication is begun in the office at least a week before hospitalization. Digitalis is usually omitted for a few days to safeguard against digitalis-associated arrhythmia. The procedure requires little anesthesia; however, it is important to have endotracheal anesthesia available. We found diazepam to be an effective anesthetic and it does not suppress*

*cardiac output if the dose is not in excess of 10 mg. Continuous electrocardiographic surveillance for the first few hours post shock adds to the safety of the procedure.*

*Cardioversion, when carried out as Doctor Lown depicts, is far safer than drug or medical cardioversion. Adequate physician surveillance, anesthesia capability and electrocardiographic monitoring are required to lend safety to D.C. electroshock. The physician in the community hospital when so fortified should not hesitate to attempt cardioversion provided the left atrium is not huge and the patient has not had long standing atrial arrhythmia.—William R. Bullock, M.D.*

IT IS now six years since the introduction of cardioversion as a method for terminating arrhythmias. To date many thousands of patients have been successfully treated. This extensive experience provides an adequate basis for assessing the advantages and limitations of cardioversion. Ectopic tachycardias in the past have been controlled by means of drugs. The use of anti-arrhythmic agents, however, presents a number of limitations. To reach an effective dose requires a time consuming biologic titration involving frequent if not continuous monitoring of patients. However, whatever the precautions, serious side effects frequently occur. Furthermore, all anti-arrhythmic drugs when given rapidly or in large doses or when administered intravenously, depress myocardial contractility and reduce peripheral resistance. This may prove especially dan-

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Prepared by the American Heart Association for The Journal.



## Cardioversion / LOWN

gerous in the presence of an arrhythmia which already has compromised cardiac reserve.

### METHOD AND RATIONALE

The majority of human tachyarrhythmias are self-sustaining by virtue of recirculation of an excitable stimulus over a fixed or variable pathway. When the pathway is blocked, the ectopic mechanism is extinguished and the sinus node resumes its usual role as dominant pacemaker. Such block can be induced by an electrical pulse which depolarizes the entire heart and thereby abolishes momentarily all excitable activity. The hazard of electrical shock, namely, cardiac asystole and ventricular fibrillation, can be prevented by the use of brief direct current (DC) pulses and by discharging these pulses into a safe part of the cardiac cycle. The dangerous part of the cycle is the vulnerable period occurring at the time of inscription of the apex of the T wave. Electrical energy triggered into the heart during the vulnerable period results in ventricular fibrillation. Transthoracic DC shocks synchronized to discharge outside the T wave are both effective and safe for terminating a diversity of arrhythmias.

### THE TECHNIQUE OF CARDIOVERSION

Since the most common disorder treated with cardioversion is chronic atrial fibrillation, the steps to be described apply especially to this arrhythmia. However, the same procedure with but slight modification is applicable to other ectopic mechanisms. In the case of elective reversion, the patient is started one to two days before the procedure on maintenance quinidine therapy in a dose of 0.3 gm (5 gr.) every six hours. The objective of administering quinidine is four-fold: 1) to develop adequate serum and tissue levels in order to prevent prompt recurrence of the arrhythmia; 2) to determine whether quinidine is well tolerated; 3) to obtain a small dividend of reversions observed in about ten percent of patients with chronic atrial fibrillation while on maintenance quinidine therapy; and 4) to diminish

the incidence of ectopic mechanisms immediately following cardioversion. One hour before the procedure 0.1 gm pentobarbital sodium (Nembutal®) is given orally. Transient amnesia is achieved by use of diazepam (Valium®) given in a dose of 2.5 mg intravenously and repeated at two minute intervals until mild anesthesia obtains. This drug is well tolerated and generally about ten to 15 mg suffices for the desired effect. The two electrode paddles are coated with liberal layers of conductive paste and applied in a front-back orientation. The anterior paddle is held with pressure on the mid sternum while the patient lies on the posterior paddle which is located in the left infrascapular region.

Perhaps the most important aspect of the procedure is to begin with low energy settings of one to five watt seconds (WS) and then proceed with higher energies such as 25, 50, 100, 200, 300, up to 400 WS. The practice of energy titration protects against serious complicating arrhythmias. For example, if electric shock provokes ectopic beats at low energies before reversion is achieved, one has the option of postponing the procedure or else administering lidocaine in a bolus of 50 mg intravenously. If such titration is carried out, it is not necessary to discontinue digitalis drugs prior to cardioversion. The reversion itself takes but a fraction of a second and the patient is usually awake within a few minutes. When a normal mechanism is restored blood pressure generally rises. There is no need to monitor the patient for a period longer than one hour if the procedure is uncomplicated.

### SELECTION OF PATIENTS

How are patients to be selected for cardio-

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version? Two questions need to be answered: 1) Is the arrhythmia susceptible to electrical reversion? 2) Will a normal mechanism be maintained for a sufficiently long time? Cardioversion has no place in the treatment of brief paroxysmal arrhythmias, recurring ectopic beats or deranged atrio-ventricular or intraventricular conduction. It is without effect when the mechanism is sinus tachycardia, a reflex physiological acceleration of the normal pacemaker which does not yield to antiarrhythmic measures. Digitalis induced rhythm disorders similarly are impervious to cardioversion. Furthermore, in the presence of digitalis, toxic arrhythmias, more serious and even fatal disorders of the heart beat may result.

A number of patients are poor candidates for cardioversion because, though sinus rhythm can be established, it cannot be maintained. When quinidine is not tolerated and adverse reactions follow procaine amide, a normal rhythm will not persist. Patients with rheumatic heart disease who have been in continuous atrial fibrillation for more than two years or those with advanced degrees of mitral regurgitation who display a giant left atrium are unlikely to remain in sinus rhythm long enough to justify cardioversion. The elderly asymptomatic patient with coronary artery disease and atrial fibrillation who exhibits a slow ventricular rate prior to digitalization is an unsuitable subject. Patients who have recurrent paroxysm of diverse atrial arrhythmias should not be reverted once they develop atrial fibrillation. They are less symptomatic with atrial fibrillation than when in sinus rhythm punctuated by frequent paroxysms of tachycardia. Patients should not be reverted before, during, or immediately after valvular operations. It is preferable to wait for ten or more days after surgery since sinus rhythm is then more likely to be long lasting.

#### OVERALL RESULTS

To date at the Peter Bent Brigham Hospital 900 patients have been reverted by means of cardioversion. Chronic atrial fibrillation accounted for 650 of these episodes; 150 had atrial flutter and the remaining 100 had either ventricular tachycardia or varying supraventricular mechanisms. The over-

all success rate was 95 percent. These results are the more impressive, since the arrhythmia in many of these patients had proved refractory to large doses of antiarrhythmic drugs. More than 2,000 electrical shocks were employed; yet, there was not a single episode of prolonged cardiac asystole and but one episode of ventricular fibrillation due to a failure to synchronize the shock. Although many of the patients were in critical condition and a number had sustained acute myocardial infarction and were in far advanced stages of congestive heart failure, none died as a result of cardioversion. Serious immediate complications were limited to ten episodes of ventricular tachycardia. These were of brief duration and readily controlled. Eight of the patients suffered systemic thromboembolic complications within one to eight days following cardioversion.

#### SPECIFIC RHYTHM DISORDERS

Atrial fibrillation is the most common chronic disorder of the heart beat. One is no longer justified in using quinidine for reversion of this disorder. With quinidine, even when given in large doses, only 50 percent of patients are restored to sinus rhythm; however, 30 percent experience significant toxic reactions and one to two percent may die from the drug. With cardioversion, atrial fibrillation can be terminated in more than 90 percent with an incidence of complications not exceeding one percent.

Immediately after the cardioversion discharge, there may be transitional mechanisms consisting of nodal rhythm, a shifting pacemaker, and ectopic atrial beats. These are observed in about 50 percent of patients and continue for 30 to 60 seconds until the sinus node "warms up." With restoration of sinus rhythm, the ventricular rate is slowed. The PR interval is generally full and, not infrequently, first degree heart block is present. The overall hemodynamic state is improved with a rise in cardiac output by about 30 percent. The most salutary effects are observed in patients who are afflicted with mitral and aortic valvular insufficiency. Maintenance quinidine therapy has to be continued in an adequate dose of at least 1.2 gm daily which results in blood



## Cardioversion / LOWN

levels of about three mg per litre. Even with this dose of quinidine, atrial fibrillation will recur within six months in 50 percent of patients.

Atrial flutter is best treated with cardioversion. It is the easiest disorder to terminate electrically. The arrhythmia generally responds to a single low energy shock of as little as one to five WS. No serious complications have been encountered.

Supraventricular tachycardias often present complex diagnostic and therapeutic problems. Frequently, it is difficult to define the mechanism precisely whether it is of atrial or nodal origin. More important is to determine whether digitalis glycosides are responsible for the disordered rhythm. If the arrhythmia is due to digitalis intoxication, electrical shock may provoke lethal disorders of the heart beat. When, however, small energies are employed and lidocaine is used to abolish ventricular ectopic beats, the supraventricular arrhythmias can be safely treated with cardioversion. The success rate, however, is only 70 percent.

Ventricular tachycardia responds well to anti-arrhythmic drugs such as procaine amide and lidocaine and these constitute the preferred therapy. When the arrhythmia, however, is accompanied by significant hypotension, or the patient is in pulmonary edema, or the tachycardia has developed in the wake of acute myocardial infarction and does not yield immediately to a bolus injection of lidocaine, cardioversion should be employed promptly.

### COMPLICATIONS

The major complication following cardioversion of chronic atrial fibrillation is systemic or pulmonary embolism. This occurs in one percent of patients who have not received anticoagulant drugs. If the reversion is elective and the underlying disease is rheumatic valvular, pretreatment with anticoagulants for two to three weeks is indicated. Aside from thromboembolism, atrial and ventricular arrhythmias may complicate the cardioversion procedure. The atrial

mechanisms generally are of three types: 1) delayed warm up of the sinus node manifested by sinus bradycardia, nodal rhythm or escape beats—the so-called “somnolent sinus node syndrome”; 2) increased atrial automaticity demonstrated by single or multiple atrial premature beats at times associated with brief salvos of tachycardia and 3) “sick sinus node syndrome,” a defect in the elaboration or conduction of the sinus impulse characterized by chaotic atrial activity and usually followed by prompt re-establishment of atrial fibrillation.

The ventricular arrhythmias complicating cardioversion are less common but more threatening than the atrial disorders. These are of two types: ventricular fibrillation, which occurs immediately after delivery of the shock and usually is the result of improper synchronization; the second type develops after several beats or within a few minutes and consists of bigeminy or multifocal ventricular ectopic beats which may result in ventricular tachycardia or rarely in ventricular fibrillation. These latter arrhythmias are generally associated with excessive digitalis. Lidocaine, in one or more injections of 50 mg intravenously, is promptly effective.

### CONCLUSION

The method of cardioversion is simple and direct. The physician can observe the entire process of reversion. It does not require a great investment of physician or patient time and is applicable to diverse arrhythmias. Differentiation between ectopic disorders, essential in the use of drugs, ceases to be a critical requisite for effective therapy.

Cardioversion is not accompanied by significant occurrence of serious complications. There is no depression of contractility, conductivity or excitability of the heart, a common sequel after large doses of anti-arrhythmic drugs. The method of cardioversion can be readily mastered by the general physician. □

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# Communication Disorders Conference

CAROL S. SAUNDERS, M.D.

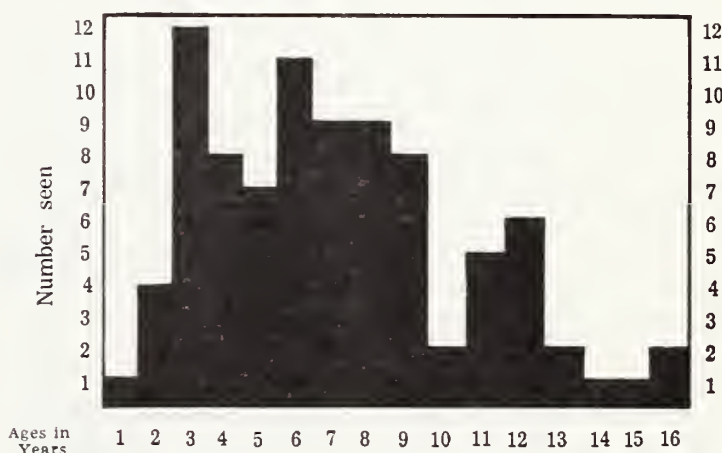
*Some children with suspected hearing losses or language disorders could profit from a multidisciplinary evaluation and recommendations regarding medical care, hearing aids, educational placement, and home stimulation.*

The Communication Disorders Conference is an interdisciplinary conference at the University of Oklahoma Medical Center in Oklahoma City. This conference has been established with the support of the Children's Bureau as one of the few in the nation that provides training for graduate students in audiology, speech pathology, psychology, medical students, and residents in pediatrics and otolaryngology in assessing children with a communication handicap from the viewpoint of the comprehensive care of the child as a person and not just the care of one area of his handicap. In this way also, realistic recommendations can be given, since a review is obtained of the child's background in areas such as medical, educational, and socioeconomic advantages or disadvantages, as well as the impact of these on his handicap and vice versa.

The members of the interdisciplinary team who evaluate the children and make recommendations for their further care are as fol-

lows: Audiology—Joseph Barry, Ph.D.; Otorhinolaryngology—James B. Snow, Jr., M.D.; Pediatrics—Carol Saunders, M.D.; Psychology—Ellen Oakes, Ph.D.; Social Work—Mrs. Pauline Hannah, MSW.; and Speech Pathology—Stuart Ritterman, Ph.D.

The following is a summary by age level of children seen at the conference in the past three years.



Many of the referrals have been children of pre- or early school age. Certainly, the earlier a referral is made, the better the prognosis should be for adjustment to a handicapping situation. It is a well known fact that sound deprivation in early life leads

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to significant speech and language difficulties. With certain exceptions a biological time clock has been formulated pertinent to the relationship of speech and audition. For instance, after three years of age the function of sound recognition begins to diminish whereas after age five it becomes increasingly difficult to train a deaf child to recognize sounds. Thus the importance of the early detection of these hearing losses is paramount to the successful rehabilitation of these youngsters.

Etiology of the hearing losses of the children evaluated in the past three years include eleven conductive type losses; eight of the 11 of these children had some variation of defective development of the first visceral arch such as Treacher-Collins syndrome. Two had hearing difficulty entirely on an emotional basis.

The remainder of the children had sensorineural losses. Six of these were felt to be familial and two of them had Waardenburg's syndrome. Five children were found to be hard of hearing following premature

birth; one following definite birth trauma; two following other severe trauma to the head. Seven were felt to have difficulty secondary to maternal rubella; three following mumps, one following bacterial meningitis, and one following kernicterus. Thirty had sensorineural hearing losses of moderate or greater severity from unknown causes.

Other diagnoses which were felt to be contributing factors to communication difficulties in some of the children included mental retardation in 12; Turner's syndrome in one; microcephaly in five; additional sensory deprivation such as visual deficiencies in two; and visual perceptual problems in four.

Since five or six appointments are necessary for the full evaluation, the parents should plan on one or two days time at the Medical Center. These appointments may be split into several different ways at the parents' convenience. Previous medical and school reports where applicable will be sought and it would save time to have these available. At the present time there is no "waiting list." □

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## Abstracts

HALLUCINATIONS—Louis Jolyon West, M.D. Published in: *Modern Perspectives in World Psychiatry*. John G. Howells, M.D., editor, Oliver and Boyd, Edinburgh, p. 265-287, 1968.

Interest in hallucinations can be found in early psychiatric literature and hallucinations were defined by Bleuler as "perceptions without corresponding stimuli from without." In the early 1800's the relationship between dream content and hallucinations had been noted as well as their causation by certain drugs. With Freud's concepts of conscious and unconscious ideation, the content of dreams and hallucinations took on new significance. However, interest in this topic seemed to lag after the 1930's.

The first major neurophysiologic disinhibition theory of dreams and hallucinations was proposed by Hughlings Jackson. This theory postulates that a sustained level of sensory input is required to inhibit the emergence of memory traces from the brain itself. When the sensory input decreases below a certain threshold,

there may be a release into awareness of previously recorded perceptions which are experienced then as fantasies, illusions, visions, dreams or hallucinations.

The author has a very interesting discussion of dream production, the effects of sensory isolation, and progressive sleep loss. With sleep deprived subjects fleeting hallucinations begin after two to three days and a progressive personality disorganization develops after 100-200 sleepless hours.

Examples of hallucinations related to decreased or impaired sensory input include the mystic, who withdraws from environmental contact by intense concentration, "highway hypnosis," patients with cataracts and phantom limb syndromes, and auditory hallucinations in patients with progressive hearing loss.

Hallucinogenic drugs are substances that in pharmacologic doses create gross distortions in perception without loss of consciousness. The psychological changes produced by such drugs have been described as a "loosening of ego structures," or "disrupting of



ego defenses" as the individual experiences thoughts, feelings and perceptions that are usually outside his awareness. The combination of cortical arousal and impaired information input leads to awareness of the "preconscious stream" of information processing which is appreciated by the individual as images. LSD by its sensory poison effects (alteration of retinal cell excitability and electrochemical activity at sensory synapses) and its cortical arousing effects may in this way produce hallucinations.

A number of hallucinogens undergo metabolic conversion in the body to more active compounds. Major research interest has focused on their effect on postulated neurohormones and other substances as serotonin, dopamine, histamine, acetylcholine, and "substance P."

The four major chemical classes of hallucinogens include: 1. Indole alkaloid derivatives, the Caribbean cahobe bean, the domestic morning glory, the hallucinogenic mushroom of Mexico, and LSD; 2. Piperidine derivatives—belladonna, stromonium, atropine, and scopolamine; 3. Phenylethylamines; mescaline; and 4. Cannabinols; hashish and marijuana.

**Reviewer's Note:** Anyone interested in a thorough review of hallucinations covering the historic, psychiatric and neurophysiologic theories of their production and the actions of the hallucinogenic drugs should read this article in *Modern Perspectives in World Psychiatry*.—C. Bloedow, M.D.

**SURGERY FOR MALIGNANT DISEASE OF THE PROSTATE.** A chapter from *Urologic Surgery*, New York: Harper and Row, 1969. W. L. Parry and C. B. Dawson.

Carcinoma of the prostate ranks second only to cancer of the lung as a killer of males over age 50 in the United States. Surgery is again becoming the chief mode of therapy. A long term cooperative study by the Veterans Administration seems to indicate that patients with prostatic cancer live as long on placebo treatment as when treated by estrogens, orchiectomy, or both combined. Use of diethylstilbestrol may result in an increased death rate from occlusive vascular disease.

The authors review the history of surgical treatment (which dates back to 1834), pathogenesis and etiology, diagnosis, and surgical procedures. At least 98 percent of prostatic malignancies are adenocarcinomata. A causal relationship between androgens, estrogens or a hormonal imbalance has not been shown. Al-

though degenerative changes in malignant cells do occur with estrogen administration, no consistent cancericidal action by hormones has been proven. The other malignancy-types are squamous cell carcinoma, two percent, and rare sarcomas.

Stage I tumors, nine percent, in which the malignancy is discovered on microscopic examination of tissue removed at surgery are focal, well differentiated and slowly growing. Usually no further surgical procedure is indicated. Stage II tumors, 11 percent, are characterized by an indurated area confined to the prostate with no evidence of local extension or metastases. Because such tumors are considered biologically active, prostatovesiculectomy is the indicated procedure. Stage III tumors, 44 percent, have extended beyond the prostate but have not metastasized. Prostatovesiculectomy is indicated if there is a minimal local extension, but contraindicated if the membranous urethra has been infiltrated. At the University of Oklahoma this procedure has provided more satisfactory results than transurethral resection. In Stage IV, 36 percent, with metastatic lesions, radical surgery is not indicated.

The authors review the following surgical approaches: perineal prostatovesiculectomy, vesicourethral anastomosis, retropubic prostatovesiculectomy, transsacral prostatovesiculectomy, postoperative management and complications, cryosurgery, radioisotope injection and regional perfusion.

**Reviewer's Note:** This chapter is an excellent, comprehensive review of carcinoma of the prostate and I would recommend its reading to all physicians responsible for the care of adult male patients.—C. Bloedow, M.D.

#### RECENT PUBLICATIONS

The *Journal* welcomes the opportunity to list current publications by any Oklahoma physician.

Hematoxylin Staining of Tissues Embedded in Epoxy Resins. T. K. Shires, M. Johnson, K. M. Richter. *Stain Technology*, 44(1), 1969.

On the Specificity of Human Gastricsin and Pepsin. W. Y. Huang and J. Tang. *J. Biol. Chem.* 244: 1085, 1969.

Textbook: "Bacterial Physiology and Metabolism." Author: J. R. Sokatch. Publisher: Academic Press, London.

Partial Characterization of an Antigen in Spontaneous Murine Mammary Tumors. J. Tacker and R. M. Hyde. *J. Cancer* 4: 21-30, 1969. □

### AMA WASHINGTON OFFICE CHANGE

The AMA's Washington office will move on July 15 to new offices at 1776 "K" Street, N.W., Washington, D.C., 20006. New telephone number will be area code 202-833-8310. All mail intended for the Washington office should be directed to the new address.



## Tumor Board Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.

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### CASE No. 13: Malignant Lymphoma in a Four-Year-Old Child

**PRESENTATION:** This four-year-old white male was well until about a week prior to referral here, when he developed a dry cough, slight fever and symptoms of a respiratory infection. The patient was treated by his local physician with antibiotics; however, he continued to get worse. He de-

veloped trouble breathing and was taken to a hospital. A chest x-ray was taken and he was immediately referred to Children's Hospital for evaluation for treatment.

On admission, the child was a well-nourished four-year-old boy who had a somewhat puffy face and was in respiratory distress. On examination, he was found to have some small one to two centimeter nodes in both supraclavicular and axillary areas. The patient was also noted to have equivocal enlargement of the liver, but otherwise the physical findings were within normal limits. A biopsy was taken of a supraclavicular node and was reported as representing a malignant lymphoma. Chest x-rays revealed a large mediastinal mass. Lymphangiograms revealed involvement of the abdominal peri-aortic nodes. The bone marrow showed no leukemic infiltration. Laboratory work showed a white blood count of 6,700 with 52 percent neutrophils, 45 percent lymphocytes, two percent monocytes and one percent eosinophils. Hemoglobin was 12.3 gm%, platelets 405,000/mm<sup>3</sup>, reticulocytes 0.9 percent. The urine was normal. The rest of the laboratory work was normal. This case was felt to represent a Stage IIIB malignant lymphoma.

Our main concern was his breathing, and tracheostomy was considered if rapid improvement did not result from initial therapy. He was placed on large doses of prednisone and also started on radiation therapy

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.



to the mediastinum, which has been treated for two days at a rate of 250 rads tumor dose per day. The mediastinal mass has almost disappeared and he is now presented to decide his subsequent course of therapy.

DOCTOR CONDIT: Doctor Bogardus, does radiation therapy ever act this fast?

DOCTOR BOGARDUS: Yes, it does, very definitely, but it is unusual to have this rapid a response, even in a lymphoma. Of course, we all know that in a case like this, we could very well be dealing with leukemia rather than lymphoma.

DOCTOR CONDIT: He has been receiving large doses of prednisone.

DOCTOR BOGARDUS: This is a question we run into when we have simultaneous treatment with more than one agent. You are never sure which one produced the response.

DOCTOR CONDIT: Doctor Lane, what do you feel should be the subsequent therapy for the patient?

DOCTOR LANE: I would rather hear Doctor Bogardus' comment. Initially, what we were worried about was the fact that this child was having marked respiratory difficulty. We had the thoracic surgeons ready to go at any time and a tracheotomy tray was set up for the purpose of doing a tracheostomy because this child was having great difficulty breathing. Prednisone was started in an attempt to make sure that he stayed alive to be treated. That was also when Doctor Bogardus started treating him; the same day he was admitted.

DOCTOR BOGARDUS: Since the patient has had such an excellent and dramatic response, our next question is whether the disease is widely disseminated or whether we still have a relatively localized and still curable disease. It could probably be considered localized in that it is still in the lymphatics and probably has not involved the spleen or liver. I think the liver enlargement was probably due to passive congestion. The spleen itself is not enlarged, and basically we must classify him as a Stage III lymphoma. Our problem is that if it is a generalized disease such as leukemia, then we have palliated him and should stop at this point. If it is not, and if it is still a Stage III lymphoma, then he perhaps does have some slim chance for cure. In this case, we

should go ahead and consider treating not only the upper mantle, as we are treating now, but extend this to include the lower abdominal lymph nodes.

DOCTOR CONDIT: If you were to proceed with the upper and lower mantle, what kind of tumor dose would you attempt to deliver?

DOCTOR BOGARDUS: In a child of this age and with a tumor which has responded such as this one has, I would go no higher than probably 2000 rads tumor dose on him.

DOCTOR CONDIT: And what effect is it going to have on the bones in that area?

DOCTOR BOGARDUS: If we stop at about 2000 rads, we probably will not have much effect on the bone. I think that he will continue to grow and probably not have any great difficulty. If we continue this on up to a higher dose, then he could have marked retardation of bone growth.

DOCTOR CONDIT: If you get above 3000 rads for example?

DOCTOR BOGARDUS: If you get above 3000 rads in a child, or even a young adult, you are going to produce stunting of bone growth. At 4000 or 5000 rads you will surely cause it. I think if we carry him to the 2000 rad level and stop, we will still have a reasonable chance for cure and probably will produce no appreciable effect on the bone nor any lasting effect on the bone marrow.

DOCTOR CONDIT: Doctor Lane, your clinical impression also was that of lymphoma rather than leukemia, is that right?

DOCTOR LANE: Yes, and I think we ought to go ahead and try to cure this child with radiation. Looking at it realistically: If he does have leukemia, there is not a whole lot we can do about it in terms of curing him. If it is a lymphosarcoma, it may convert to the leukemic form. We would still be dealing with a disease with a poor prognosis. My feeling is that we should assume that it is a lymphoma. It is certainly uncommon in children as compared with older people, but it is more likely to be curable than leukemia. He presents in a much different fashion than usual for leukemia. Certainly when we see leukemics with this much involvement around the trachea, we almost always see bone marrow involvement. My opinion would be to do what Doctor Bogard-



## *Clinic* / BOTTOMLEY

us suggested and attempt to cure him with radiation therapy. We have lost nothing even if he ends up being a leukemic.

DOCTOR CONDIT: Doctor Bottomley, would you care to add anything to this discussion?

DOCTOR BOTTOMLEY: The other possibility would be to consider some type of combination chemotherapy in addition to the radiation therapy. Of course, he has already had chemotherapy as represented by prednisone and there has already been considerable reduction in the amount of tumor tissue. The other advantage of prednisone is that it does not depress the bone marrow as do the alkylating agents and vinblastine. I was wondering whether it is very common to see this type of disease in this age group. Have you seen any before?

DOCTOR LANE: I have seen one lymphosarcoma present in the same way. Even with the best of luck, with a combination chemotherapy regimen, you would not approach the cure rate that can be achieved with radiation. Assuming that this comes back after using radiation therapy, we can still use a drug.

DOCTOR BOTTOMLEY: What about thymus involvement? How often do you see that in children with lymphoma?

DOCTOR BOGARDUS: It is usually not the thymus that is enlarged. It is usually nodes around the thymus. Primary thymomas, although they are radioresponsive, do not respond like this tumor did.

DOCTOR CONDIT: Does everyone agree with the form of therapy?

RESIDENT: We considered doing a liver biopsy on this child, if the liver did not recede, but it has. Now, this could have been from congestion, but if it were from tumor infiltration then it could have gone down from the effects of prednisone. Do you think it is worthwhile to do a liver biopsy at this time?

DOCTOR LANE: Personally, I don't think it is worthwhile at this point. We should not do anything that will interfere with the treatment. We ought to go ahead and attempt to cure him now.

**FINAL DIAGNOSIS:** Malignant lymphoma Stage IIIB.

## **TUMOR CLINIC RECOMMENDATION:**

Attempt curative radiation therapy to the cervical, axillary, mediastinal, abdominal periaortic and inguinal lymph nodes to a dose of approximately 2000 rads.

### **CASE No. 14: Hodgkin's Disease**

**PRESENTATION:** The patient is a 27-year-old white male who was apparently well until approximately one and one-half months ago when he developed a persistent low grade fever and pruritis. He called his local physician who treated him with antibiotics for a urinary tract infection, but he did not respond. He was referred to another physician who found some enlarged lymph nodes in the right supraclavicular region and the left axilla. He was also found to have an enlarged spleen. A lymph node was biopsied and the pathologic diagnosis was Hodgkin's granuloma.

The patient was referred to the University of Oklahoma Medical Center where he had a lymphangiogram which revealed involvement of the periaortic lymph nodes. A spleen and liver scan revealed a markedly enlarged spleen with a normal liver. The spleen had multiple filling defects. The patient was relatively asymptomatic except for the fever and pruritis. It is felt that this patient has Stage IIIB Hodgkin's Disease and his case is being presented for recommendations as to the type of therapy he should receive.

DOCTOR CONDIT: This patient presents a rather crucial therapeutic problem because it has become apparent in the last ten years that early Hodgkin's Disease may be curable in a high percentage of the cases. Many of the patients with Stage I and Stage II Hodgkin's can be controlled with radiation therapy. That is why, when a patient is seen, it is very important to establish the extent of the disease by doing lymphangiograms, scans and other indicated procedures. This man presented with fever and pruritis and probably has some hematologic dysfunction now with anemia. He does have a positive lymphangiogram. There are nodes on both sides of the diaphragm, a superior mediastinal mass, and an enlarged spleen, altogether representing a rather advanced form of the disease. Doctor Bogardus, would you like to lead off the discussion of the management?



DOCTOR BOGARDUS: Many people feel that a Stage IIb such as this should be treated initially with radiation therapy. This would mean extensive fields, an upper and lower mantle, including the spleen. I would say definitely that this patient should be treated. The other question that comes up is, is it possible to do something to help improve the odds? A far advanced Stage III like this runs perhaps a ten to 20 percent chance of cure. Recently we have treated a number of advanced cases with a combination of chemotherapy and radiation therapy. These patients have not done particularly well because of the combined toxic effects of the two modalities. They have had considerable difficulty with depression of the white blood count and platelets. We might try a slightly different approach with this patient, and treat him with chemotherapy first in order to get as much regression of tumor as possible, then follow this with complete and radical radiation therapy covering all of the involved node areas. Perhaps if the drugs are successful in bringing down the volume of the tumor, then radiation therapy might have a better chance of eliminating the tumor entirely. We have found this to be true with other types of tumors and perhaps it would work with Hodgkin's Disease. I do not think we would jeopardize his chances by treating him in this fashion, and we may very well have some chance of increasing the possibility of a cure.

DOCTOR CONDIT: I think it is quite true that in some centers he would not even be considered a candidate for radiation therapy. He would go directly to chemotherapy with radiation therapy to palliate specific lesions.

DOCTOR BOGARDUS: That is exactly right. There are a number of places that consider anything beyond an early Stage I or II as being a totally incurable lesion, but this is not true. A number of centers have shown without question, and I think that we have shown the same thing in our patients, that even a Stage IIb does stand a small chance of cure. Anything we can do to increase this chance should be tried.

DOCTOR CONDIT: Doctor Bottomley, what about chemotherapy in this patient?

DOCTOR BOTTOMLEY: Although nitrogen mustard used to be the standard chemo-

therapeutic agent for the treatment of Hodgkin's Disease, we now have several additional drugs which can be used in place of nitrogen mustard, or can be given after the patient becomes resistant to it. Nitrogen mustard given as a single intravenous injection can rapidly bring down the fever and stop the itching. The disadvantage of nitrogen mustard is the nausea and vomiting and the rather prolonged bone marrow depression which follows its administration. The oral alkylating agents such as "Cytosan" and "Leukeran" are also effective in the disease and many people are now using them in preference to nitrogen mustard. The vinca alkaloids, vincristine and vinblastine, are rather recent additions to the drug therapy of Hodgkin's Disease, and vinblastine produces as high a percentage of remissions as does nitrogen mustard.

DOCTOR BOGARDUS: What about the use of some of the newer experimental drugs like BCNU?

DOCTOR BOTTOMLEY: Recently two other drugs have been found to have activity in the treatment of Hodgkin's Disease. One of these is procarbazine ('Natulan'), which has been studied rather extensively in Europe, and the second is BCNU (1,3-Bis (2-chloroethyl-1-nitroso-urea). Another approach that has been used recently is to combine two or more drugs in an attempt to obtain a complete remission of the disease. This would be a possibility in this patient.

DOCTOR CONDIT: The experience with BCNU so far has been rather limited. It has a rather distressing problem in that the depression of the blood count occurs five to six weeks after discontinuing the treatment. It makes it a little hard to plan the therapy. Doctor Chanes, what are your thoughts about chemotherapy?

DOCTOR CHANES: Several different combinations have been used in other centers, but most of these have been quite depressing to the bone marrow. The one currently used at the National Institutes of Health is one consisting of nitrogen mustard, "Oncovin" (Vincristine), procarbazine ("Natulan"), and prednisone with the nickname MOPP. Another possibility would be to use BCNU in combination with some other agent such as Procarbazine. As far as I know, no one has studied the combina-



tion of BCNU with other agents, but this has been recommended strongly on the basis that BCNU seems to have considerable activity against Hodgkin's Disease. In using chemotherapy prior to radiation therapy, one should use a combination that would give, if possible, a long lasting remission because that would give radiation therapy time enough to finish the job. In previous studies where patients with Hodgkin's Disease have been treated with a single drug prior to radiation therapy, the disease recurred before the radiation therapy had been completed. It would, therefore, appear that the best possibility of controlling far-advanced disease would involve treating the patient with some combination of drugs prior to the institution of radiation therapy. One combination which has been used recently and which is not markedly depressing to the bone marrow is vinblastine with prednisone. We have had several fairly good remissions using these two drugs and they do not have the same toxicity, *i.e.*, depressing the bone marrow.

DOCTOR CONDIT: And it is not felt that this jeopardizes subsequent radiation therapy?

DOCTOR CHANES: No, because enough time between chemotherapy and radiation therapy must lapse to allow the bone marrow to recover.

DOCTOR BOGARDUS: This would be extremely important to us because when we run into the problem of marrow toxicity following drugs, we try to follow this with radiation therapy over large fields, which results in a depression of the blood count and we have to discontinue treatment.

DOCTOR CONDIT: Would you encounter some problems if you used drugs and radiation therapy simultaneously?

DOCTOR BOGARDUS: Yes, it would be much worse if they were combined, and this is why I am not advising it this time, but I do think that it would be very good if we could get some type of chemotherapeutic remission and then follow this in a reasonable period of time, say one to two months later, with radiation.

DOCTOR CONDIT: Any other discussion about this patient? We will proceed with some type of chemotherapy, probably vinblastine and prednisone, and then consider radiation therapy when this has been completed.

*FINAL DIAGNOSIS:* Hodgkin's Disease, Stage IIb.

*TUMOR CLINIC RECOMMENDATIONS:* The patient initially would receive chemotherapy, probably vinblastine and prednisone, followed in one or two months with radical radiation therapy to the lymph-node-bearing areas and the spleen. □



# Books As Clinical Tools

*"It is astonishing with how little reading a doctor can practice medicine, but it is not astonishing how badly he may do it."*—Osler

## CLINICAL REFERENCES IN DIABETES

KELLY M. WEST, M.D.\*

No attempt will be made to describe all the important publications designed primarily to convey research progress; rather attention will focus on books that are most frequently helpful to the practicing physician. Even those physicians who do not regularly assume direct responsibility for the treatment of diabetes usually have many patients who incidentally have diabetes which may complicate or be complicated by other conditions such as pregnancy, dermatologic pathology, surgical or psychiatric disorders, etc. Thus, almost all clinicians will find it useful to know how and where to retrieve information on clinical diabetes. I will, therefore, mention some publications that discuss diabetes in simple, succinct, and general terms as well as volumes with detailed information.

For many years *the* standard monograph in clinical diabetes mellitus was Joslin's book.<sup>1</sup> Unfortunately, the most recent edition was issued in 1959. The book was originally written entirely by Joslin himself who recently died, but the last edition had many contributors. Although somewhat out of date, the 1959 book still has considerable clinical utility. Although it is called *Treatment of Diabetes Mellitus*, almost all aspects of the disease, including diagnosis, are covered in some detail. The book is very well indexed and there is an excellent list of references for literature prior to 1959. A new edition is in preparation and is expected soon. The monograph entitled *Diabetes*<sup>2</sup> was prepared under the editorship of Williams and published in 1960. Like the book of Joslin,

it is also comprehensive, high in quality and slightly out of date.

For the physician interested in less detailed presentations there are good brief summaries on diabetes in the standard textbooks; in Cecil-Loeb<sup>3</sup> by Bondy, and in Harrison<sup>4</sup> by Thorn, Forsham, and Steinke. One of the best reviews of intermediate length in this field is the small volume edited by Waife<sup>5</sup> and published by the Eli Lilly Company. The illustrations are especially good. For example, one figure summarizes very clearly and succinctly the time-action curve of the several different kinds of insulin.

Diabetes receives considerable attention in the 1964 book *Metabolism*<sup>6</sup> edited by Duncan. (A new edition is due in 1969 under the editorship of Bondy.) Duncan himself contributed a long essay of high quality on diabetes; and Jackson and Pickens wrote a section on diabetes in childhood. Although they are slightly out of date the essays in Duncan's book by Levine (on carbohydrate metabolism) and by Strang (on obesity) are excellent. In 1964 and 1967 the American Diabetes Association issued small monographs entitled *Diabetes Mellitus*.<sup>7, 8</sup> These small volumes contain good, brief, and simple summaries concerning the various aspects of clinical diabetes written by many different authorities in this field. The first volume was edited by Danowski<sup>7</sup> and the second by Hamwi and Danowski<sup>8</sup> who served as chairmen of the ADA committees which developed these volumes. These monographs are not a recitation of research progress, rather they are designed to provide practical and clinically relevant information for the practicing physician who does not specialize in this field. These volumes are small, short, and cheap. The textbook on endocrinology edited by Williams<sup>9</sup> contains an excellent detailed essay (179 pages) on diabetes by Williams. It may be noted that this book is more recent (1968) than the volumes mentioned above. Every practicing internist and general practitioner should consider this book for his personal library.

Two good publications have been written

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One of a series sponsored by the Department of Continuing Education, University of Oklahoma School of Medicine.



recently by British authors. The book on carbohydrate metabolism edited by Dickens, Randle, and Whelan<sup>10</sup> has been issued in two volumes of medium size. Several leading authorities have contributed to this work. Their main purpose is to summarize the present status of medical science in this field, but technical details of research methodology are, for the most part, omitted, and specific attention is given to the clinical relevance of these research advances. Another recent British book edited by Oakley, Pyke and Taylor<sup>11</sup> concerns itself more directly with clinical diabetes. The book of Oakley and his associates is not quite so detailed as the older textbooks on diabetes of Joslin and of Williams, but clinical diabetes is well covered. Both of these new British books contain good collections of references. The newest volume (1969) in the field is a monograph edited by Pfeiffer.<sup>12</sup> This comprehensive *Handbook of Diabetes Mellitus* contains essays by leading authorities from both Europe and America. Its cost (\$72.50) will be prohibitive for some.

The Scandinavians have made some excellent contributions in recent years in both research and teaching in the field of diabetes. An example of this is the excellent small volume by Pedersen<sup>13</sup> on pregnancy and diabetes. This monograph is presented in a way that makes it useful both to investigators and clinicians in this field. Books by Cornblath<sup>14</sup> (on carbohydrate metabolism in infancy), by Bloodworth<sup>15</sup> (on endocrinologic pathology), and by Warren and LeCompte<sup>16</sup> (on the pathology of diabetes) will not be needed frequently by most practitioners, but they cover these special fields well.

Finally, there is, of course, a substantial amount of clinically relevant information in the journals. Among the journals which are particularly concerned with developments in this field are *Diabetes, Metabolism*, and the new European journal, *Diabetologia*. The journal, *Diabetes*, presents abstracts on almost all of the significant literature in the field of diabetes within a few months after the original articles appear. The National Institute of Arthritis and Metabolic Diseases issues a detailed monthly and a cumulated yearly index<sup>17</sup> of the diabetes literature

by subject and by author. The monthly index is published several months after the publication dates of the original articles. *Current Medical References*<sup>18</sup> lists some key articles on diabetes; and the new publication, *Insta-dex*,<sup>19</sup> lists each month by subject, including diabetes, the titles of all the articles which have been published recently in the major clinical journals.

In summary: For brief, simplified, and general reviews see books such as the standard texts of Harrison<sup>4</sup> or Cecil-Loeb,<sup>3</sup> or the little volumes issued by the American Diabetes Association.<sup>7, 8</sup> For information which is somewhat more detailed with respect to certain aspects of the disease one might refer to the discussions in Duncan's book<sup>6</sup> on metabolism or Williams' book<sup>9</sup> on endocrinology. Still more detailed information is available in the older textbooks of Joslin<sup>1</sup> and Williams (*Diabetes*<sup>2</sup>) and in the more recent books of Oakley,<sup>11</sup> and of Dickens,<sup>10</sup> and of Pfeiffer.<sup>12</sup> In the paragraph above some new indexes are described which will help the clinician in retrieving diabetes-related information from medical journals. □

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## Showdown on Medicaid Looms

The Department of Health, Education and Welfare enacted on July 1st new regulations governing the payment for physicians' services under the Medicaid program.

Struggling to cope with a poorly designed program which is on the brink of bankruptcy, an ad hoc committee appointed by HEW Secretary Finch has chosen to cut doctors' fees as an economy measure rather than to redesign Medicaid to make it actuarially sound.

Although many state Medicaid plans will suffer considerably under the new regulations, OSMA officials have conferred with the Director of the Department of Public Welfare and have agreed on an interpretation of the regulations which should permit Oklahoma physicians to continue to receive payment on a "usual, customary and reasonable" fee basis. However, there is no final word from Washington at this writing, and it is entirely possible that a fee cut in Oklahoma may be enforced at the national level.

### Trustees to Meet

OSMA President Hillard Denyer, M.D., has consulted with the association's Executive Committee, and because of concern over the prospect of a fee cut and the certainty that doctors' fees will be "frozen" until July 1st, 1970, a special meeting of the OSMA Board of Trustees has been called for August 9th at 3:30 p.m. in Oklahoma City.

### Summary of Regulations

Several significant points are made in the new regulations, a few of which are highlighted below:

- If a state Medicaid plan pays charges higher than allowed for Medicare, then it will have to cut back to the Medicare level. In Oklahoma, Medicaid payments are generally the same as Medicare, so it may be expected that no material changes

will have to be made in the present program. Medicare permits the carrier to recognize a "prevailing range of charges" in a given geographic area based on the 83rd percentile of the full range of charges for a particular procedure. In other words, a doctor's customary charge would not be paid if it fell within the top 17th percentile of charges for the same procedure in his area.

- Most states will have to scale their prevailing ranges of charges on the 75th percentile level (Oklahoma may be one of the few states able to qualify under the 83rd percentile formula).

- Some states which are currently paying on a scale falling between the 75th and 83rd percentiles will be able to continue on that basis.

- "Fee profiles" of individual practitioners are to be based on those existing as of January 1st, 1969 (It is not known at this time whether profile changes granted by the Department of Public Welfare since January 1st will have to be withdrawn).

- No changes in fee profiles will be allowed until July 1st, 1970. At that time, fee increases will have to be based on the services component of the Consumer Price Index (excluding the medical services component).

### Costs of Medicaid

In 1968 Medicaid cost \$3,500,000,000 and served 8,500,000 people. Unless the law is changed, by 1975 Medicaid is expected to cost from \$12 to \$16 billion annually.

The U.S. Senate Finance Committee has been investigating Medicaid costs in recent months, and several Senators on the committee have been especially abusive to the medical profession. Senator Williams of Delaware caused to be released to the press the names of all physicians in

the nation who received Medicaid payments in excess of \$25,000 in 1968.

The Social Security Administration has blocked release of information on Medicare payments to physicians, but Senator Russell Long (La.), Chairman of the Finance Committee, has promised to overcome this barrier and to release physicians' names and payments under Medicare.

### IRS Investigation

Senator Long has also announced further harassment of the medical profession and other practitioners by requesting investigation by the Internal Revenue Service of those who received more than \$25,000 under federal health programs. The IRS Commissioner has announced that he will cooperate.

Meanwhile, the Department of HEW is drafting legislation to authorize the Social Security Administration to "eliminate" from the Medicare program any "gougers."

### OSMA Position

Since Medicare and Medicaid began in 1966, the OSMA House of Delegates has stated repeatedly that physicians must receive their customary and reasonable fees under government programs.

If the new Medicaid regulations result in a fee cutback, the association will be put to a test as to whether or not it can continue to cooperate in the program—a subject which will receive the attention of the Board of Trustees on August 9th. There will also be discussion regarding the government's decree that physicians are to be singled out and told that they cannot keep abreast of generalized inflation by adjusting their fees as overhead increases.

It is anticipated that a special called meeting of the House of Delegates may be required following the Trustees' consideration of recent deterioration in government relations. □





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## Trustees Adopt New Claims Review Policy

A new policy and procedure for the operation of the Medical Insurance Claims Review Committee has been adopted by the OSMA Board of Trustees. Mail ballots were used by the trustees to accept a streamlining of the committee functions.

Recent publicity regarding payment to physicians under Medicaid prompted an analysis of the procedure for reviewing and passing judgment on questioned insurance claims from Medicare and Medicaid carriers. In a letter to the trustees, Hillard E. Denyer, M.D., OSMA President, said that the association was not concerned "about physician-abuse of Medicaid or Medicare, but we do feel that our 'peer review' mechanism could be streamlined for a more expeditious processing of such matters."

The new organization and procedure for the committee was recommended by a joint committee consisting of three physicians from the Medical Advisory Committee of the Department of Public Welfare and representatives of the OSMA.

The joint group felt that improvements could be made by both the OSMA and the DPW. It observed that the old claims review system was often unduly slow in providing a decision on a problem case. It was felt that this could be expedited by more-or-less centralizing the authority for claims review in the form of a broadly-representative OSMA committee which would meet monthly.

The joint group also felt that cooperation between the association and the welfare department must be improved.

The new organization and procedure rules were drafted and approved by Robert Sukman, M.D., Chairman of the OSMA Governmental Relations Committee, and by Mark D. Holcomb, M.D., Chairman of the Medical Insurance Review Committee, before being submitted to the trustees.

The new procedure creates a 20-man central committee with a chairman and vice-chairman. The members are to be selected geographic-

ally and by type of practice. It shall be divided into two groups of equal size and one of the 11-man groups shall meet at least once each month if required.

Claims to be reviewed shall be submitted directly to the central committee along with a clear statement as to why the claims are being submitted. As soon as the claim is received, the OSMA committee chairman shall immediately schedule it for a specific date for hearing, provided that cases received less than 15 days prior to the next scheduled meeting shall be deferred to the meeting scheduled for the following month. This means that any questioned claim will receive adjudication within a maximum of 45 days.

As soon as a claim is received, the chairman of the OSMA committee will notify the involved physician and the chairman of the county society review committee where the physician resides. Both the involved physician and the county society will receive complete copies of the information submitted and shall be invited to attend the hearing. If the county review committee chooses, it may furnish a written opinion on the problem to the state association committee prior to the scheduled meeting date.

As in the past, the new rules state that cases may be filed by carriers or insurance companies, by individual physicians, or by patients.

Conditions prerequisite to medical review will remain the same. The claim will only be heard if the coverage involved is for payment on a usual, customary and reasonable basis. In addition, all other appropriate avenues of settlement must have been attempted prior to requesting review.

The expanded claims review committee will hold its organizational meeting in late July and begin hearing claims at that time.

Prior to the organizational meeting, all insurance carriers will be asked to provide the committee with summaries of their program benefits, rules for filing of claims, exceptions, and rules for changing fee profiles. □

## Physician List Goes To IRS

Following on the heels of its request for all physicians who have been paid more than \$25,000 under Medicaid, the U.S. Senate Finance Committee has now revealed that the names and addresses of all such physicians will be given to the Internal Revenue Service. Senator Russell B. Long, Louisiana, chairman of the committee, made the announcement in what many believe to be the first of a long series of Senate floor speeches on alleged abuses in the Medicare and Medicaid programs.

The Louisiana Senator said that the Committee on Finance had developed information as to payments made to physicians, dentists, optometrists, and other health care providers. "We have found," he stated, "that a large number of these people receive what appear to be extremely high payments in 1968." He noted that while some are justified because the individual's practice consists primarily of Medicare and Medicaid recipients, others are not.

In reply to the Social Security regulations which forbid the release of information on Medicare, the Senator promised that the Finance Committee will shortly have the names and addresses of all physicians who were paid more than \$25,000 by the program. However, he did not explain how he intends to obtain the list.

Long's remarks about giving the list to the IRS were apparently made in response to the Department of Health, Education and Welfare's decision not to do so. □

## Smithson Elected Mayor of Dewey

On April 1st, the 4,000-person community of Dewey in northeastern Oklahoma elected John R. Smithson, M.D., to a three-year term as mayor.

Doctor Smithson is in general practice in that city and is a 1955 graduate of the University of Oklahoma School of Medicine. He took his internship at Mercy Hospital in Oklahoma City. □



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# Proceedings of the 63rd Annual Session of the House of Delegates of the Oklahoma State Medical Association

## OPENING SESSION

### CALL TO ORDER:

The House of Delegates convened its 63rd Annual Session in the Tulsa Assembly Center, Tulsa, Oklahoma, on May 16, 1969. The Speaker, C.M. Hodgson, M.D., Kingfisher, called the meeting to order at 9:15 a.m.

### INVOCATION:

Edward K. Norfleet, M.D., Tulsa, delivered the invocation.

The presence of a quorum was reported by C. Riley Strong, M.D., El Reno.

### COMMITTEE APPOINTMENTS:

Doctor Hodgson announced the appointment of the following committees to assist in the conduct of the meeting:

#### *Credentials Committee*

C. Riley Strong, M.D., El Reno, Chairman

Robert S. Ellis, M.D., Oklahoma City

Clarence P. Taylor, M.D., Ada

Bill E. Woodruff, M.D., Hugo

#### *Sergeants at Arms*

Charles C. Elliott, M.D., Okemah, Chairman

Richard A. Conley, M.D., Watonga

A. M. Brown, Jr., M.D., Perry

#### *Tellers*

John R. Reid, M.D., Nowata, Chairman

E. L. Buford, M.D., Guymon

J. D. Powell, M.D., Poteau

#### *Parliamentarian*

Roger Reid, M.D., Ardmore, Vice-Speaker of the House of Delegates.

#### *Reference Committee No. I.*

Bob J. Rutledge, M.D., Oklahoma City, Chairman

James V. Miller, M.D., Ardmore

Leroy L. Engles, M.D., Durant

C.S. Lewis, Jr., M.D., Tulsa

Lynn H. Harrison, M.D., Oklahoma City

Clair Liebrand, M.D., Bartlesville

Richard H. Burgtorf, M.D., Shattuck

P.H. Medearis, M.D., Tahlequah

Recording Secretary: Don Blair

#### *Reference Committee No. II.*

Duane E. Brothers, M.D., Tulsa, Chairman

Myra A. Peters, M.D., Tulsa

Elwood Herndon, M.D., Oklahoma City

R. B. Carl, M.D., Oklahoma City

James L. Haddock, M.D., Norman

W. A. Matthey, M.D., Lawton

H. V. Schaff, M.D., McAlester

Recording Secretary: Martina Doyle

#### *Reference Committee No. III.*

Richard W. Loy, M.D., Pawhuska, Chairman

Emil E. Palik, M.D., Tulsa

Robert L. Anderson, M.D., Tulsa

Frank C. Lattimore, M.D., Kingfisher

S. N. Stone, M.D., Oklahoma City

Ann K. Kent, M.D., Muskogee

Robert P. Metcalf, M.D., Hollis

Recording Secretary: Dixie Griffith

#### *Reference Committee No. IV.*

Thomas E. Rhea, M.D., Idabel, Chairman

Malcolm Mollison, M.D., Altus

Lloyd Owens, M.D., Oklahoma City

Jack D. Honaker, M.D., Frederick

Robert D. Grubb, M.D., Tulsa

Harold Stout, M.D., Waurika

John A. McIntyre, M.D., Enid

John E. Highland, M.D., Miami

Recording Secretary: David Bickham

### INTRODUCTION OF GUESTS:

Mrs. Alfred T. Baker, Durant, retiring President of the Woman's Auxiliary to the Oklahoma State Medical Association; Mrs. J. Hartwell Dunn, Oklahoma City, incoming President of the OSMA Woman's Auxiliary; Mrs. Virgil Ray Forester, Oklahoma City, President of the Woman's Auxiliary to the Southern Medical Association; Mrs. Glenn Scott, Jr., Southern Regional Vice-President to the American Medical Association; and Joe G. Fagan, Oklahoma City, President of the O.U. Chapter of the Student American Medical Association were introduced and brought greetings to the House of Delegates. Mrs. Baker commented that the OSMA Auxiliary will consider a \$2,000 contribution to the OSMA Building Expansion Fund at its annual Board meeting.

Doctor Scott Hendren, OSMA President, introduced Doctor James

L. Dennis, Oklahoma City, Dean of the University of Oklahoma School of Medicine, and presented him with an AMA-ERF check in the amount of \$8,302.53.

Doctor Dennis reported briefly on the progress being made at the Medical Center and observed that William E. Brown, Jr., D.D.S., who is presently associated with the University of Michigan School of Dentistry, has been selected as Dean of the new Oklahoma University School of Dentistry.

Mrs. Ann Strobridge, President, Oklahoma State Medical Assistants Society, was introduced and reported that educational courses are being initiated by the Medical Assistants Society (detailed information concerning the program may be found in the OSMA Council on Professional Education's report to the House of Delegates).

Lucien Pascucci, M.D., Tulsa, General Chairman of the Annual Meeting Committee, and Albert L. Shirkey, M.D., Tulsa, Program Chairman, were recognized for their assistance in conducting the 1969 OSMA Annual Meeting.

A. B. Colyar, M.D., Health Commissioner for the State of Oklahoma, announced that the State Department of Health has changed the infant and fetal death reporting forms to comply with the request of the OSMA Maternal Mortality Committee. He informed the Delegates that the Department of Health, Education and Welfare has requested an additional \$10,000,000 to augment the Communicable Disease Program; and stated emphasis will be placed on immunizing children against Rubella. Regarding recently enacted legislation, (i.e., Water Pollution Act, Oklahoma Clean Air Act of 1968, Amendments to the Radioactive Control Act, etc.), Doctor Colyar commented on various proposals the Health Department will become involved in implementing in the near future.

Continued on page 312



## Insurance Council Accepts Liability Policy Change

Two changes proposed by the Insurance Company of North America in OSMA's malpractice insurance program have been accepted by the association's Council on Insurance. The changes were adopted at the June 22nd meeting of the Council in Oklahoma City.

The association's professional liability insurance program with INA is one of the most successful in the country. It is based upon a contract between the insurance company and the association which offers advantageous features that cannot be obtained elsewhere in the Oklahoma insurance market. One such advantage is a dividend feature in the policy which returned \$25,000 in premiums to those physicians who participated in the program in 1968. The dividend was distributed in the first part of July.

INA requested the association's permission to change the policy in order to achieve a more equitable distribution of benefits to all OSMA members, regardless of type of practice. One change was to shift from the four class of risk system to a five class system. In addition, a change in rates would be made so that physicians would be paying ten percent less than the insurance rating bureau rates.

This latter change in rates will mean a reduction in cost to Class I physicians and a slight increase in other classifications. The Council found the slight increases acceptable after hearing an explanation of the statistical difficulties encountered when trying to formulate an actuarial picture of malpractice losses.

The difficulty was explained by Rod Frates, OSMA insurance counselor. He noted that the insurance loss is immediately known in other types of casualty insurance. However, in malpractice situations, the loss may not be known for months or even years after the incident.

A 1961 nationwide survey of physicians' professional liability revealed

the following: During the first 12 months that a professional liability policy was in force only ten percent of the losses were reported. After the 30th month a total of 63 percent had been reported, and by the end of the 60th month there was still five percent of the total loss unreported. This illustrates the great difference between professional liability insurance and all other types of insurance. When two cars collide, the company is aware of the accident and is able to include the loss in its actuarial picture. Usually within the first 24 months after the date the policy was written, the insurance company has received notice of all but a fraction of the losses incurred. This is not true in professional liability insurance. In one Oklahoma case it was nearly 23 years after the incident before the loss was known.

This long-range loss situation is an outgrowth of court decisions and state laws that say the statute of limitations does not begin to run on a malpractice case until the injury is discovered. The insurance company's request for the slight increase in rate was based on this nationwide trend.

The change to a five class-of-risk system for physicians was made in order to more equitably distribute the loss risk throughout the full range of medical practice. The result will be that some physicians in high risk specialties currently in Class IV will be placed in Class V. Both the council and the company felt that since every other insurance carrier in the nation is writing on a five class system, this would put the association program in a more competitive light.

The new rating and classification system will go into effect January 1st, 1970. □

## U.S. Chamber Approves New Policy on Medicare

Members of the U.S. Chamber of Commerce overwhelmingly approved a new statement dealing with the federal Medicare program. The new declaration, entitled "Federal Health Insurance," was favored by 86 percent of the voters in a referendum

which closed May 29th.

The OSMA, at the direction of its Board of Trustees, was among 14 percent of the voters opposing the policy change. Ostensibly, the change was to improve the U.S. Chamber's lobbying position regarding favorable amendments to the Medicare program.

The U.S. Chamber stated that the new policy does not express endorsement of the existing program for those 65 and over. Rather, it reflects a sincere effort to set guides to deal realistically with the many problems and issues arising under the Medicare program. □

## Chiropody Now Podiatry

The Oklahoma State Board of Chiropody has now changed its name. On June 9th the Board adopted a resolution to change its name officially to the Oklahoma State Board of Podiatry.

The name change was the outgrowth of Senate Bill 353, adopted by the first regular session of the Thirty-Second Legislature. This bill recognized that the terms "podiatry" and "chiropody" are synonymous and authorized the board to change its name.

The name change is also in line with a nationwide movement to standardize the use of the term "podiatry." □

## Nurse Board Issues Warning

A fake "graduate nurse" may be seeking employment in the state of Oklahoma, according to the Oklahoma Board of Nurse Registration. A Mrs. Nathella Rose Van Baale Myers has sought employment in Oklahoma as a nurse.

She has claimed to be a graduate of the Cook County Hospital School of Nursing, Chicago, Illinois, in 1951. The school denies that any person by this name has been graduated from there. The references which she has given have proved to be fictitious.

The Board of Nurse Registration has asked that they be notified immediately if this individual seeks employment. □





## Alums Honor Graduating M.D.'s

Doctor Robert McCaffree, president of the Class of '69 is welcomed into the Alumni Association of the University of Oklahoma School of Medicine at the organization's annual honoring house at Faculty House. Mrs. Robert Ellis, Oklahoma City, wife of the Oklahoma City physician, and Doctor Ed L. Calhoon, Beaver, alumni president and OSMA president-elect, identify Doctor McCaffree with a wise old owl lapel pin. The new physician is interning at the OU-VA Hospitals. In the background is Doctor C. Riley Strong, El Reno, Chairman of the OSMA Board of Trustees.

Doctor McCaffree was one of 98 graduating seniors who received M.D. degrees on June 8th at the School of Medicine commencement exercises on the Norman campus.

Each year, members of the graduating class and their wives, husbands and dates are feted by the alumni association at a commencement-evening party. □

## DEATHS

BERTRAM R. PROVOST, M.D.  
1917-1969

Bertram R. Provost, M.D., Hominy physician, died at his home June 21st, 1969.

A native of Manchester, New Hampshire, Doctor Provost was a graduate of St. Louis University School of Medicine. He was formerly a staff member of the Hissom Memorial Center, Sand Springs and was a member of the American Association for Mental Deficiencies.

RUTHERFORD B. HAYES, M.D.  
1877-1969

A pioneer Guymon physician, Rutherford B. Hayes, M.D., died June 3rd, 1969 in Guymon. A graduate of Indiana Medical College, School of Medicine of Purdue University, Doctor Hayes had practiced in Guymon since June, 1906.

He had been awarded a Life Membership in the Oklahoma State Medical Association for his years of dedicated service to humanity. □

## BOOK REVIEWS

**HANDBOOK OF PEDIATRIC MEDICAL EMERGENCIES** was edited by Charles Varga, M.D., Associate Clinical Professor of Pediatrics, University of Oregon Medical School, with several contributing authors. There are 694 pages with 120 illustrations in this cloth bound 4th edition published 1968 by C. V. Mosby Company of St. Louis, Missouri. Retail price \$19.75.

The general outline of the book is conducive to its stated purpose. The contents are simply worded, unencumbered guides to emergencies classified by organ systems. The chapters are well ordered with the subject in bold headlines and a 1-2-3 guide to diagnosis, therapy, and complications. The appendix contains charts related to weight and surface area guides to fluid therapy and drug dosages to be used in emergency situations. There is also a description of commercially available parenteral fluids and a brief section related to poisonous ingredients of commercial products. The book itself is well indexed.

A nice description of various pediatric procedures is included. The descriptions are clearly written and cover situations from utilizations of restraints through blood-letting, intravenous infusions to peritoneal dialysis and resuscitation procedures.

The section on poisoning contains a good general guide to household materials available for therapeutic measures and a guide to physician responsibilities and immediate management of various classes of poisons. A list of more commonly encountered poisons is included with a step-by-step guide to diagnosis and therapy.

Also included are subjects which are probably not related to emergency situations but are helpful to have available. Of these, worthy of note, is the material related to pediatric inhalation therapy which describes the general use of ventilatory aids, airway management, complications of ventilators, mist use, and positive pressure respiration.

Further subject investigation is fa-



cilitated by a 28-page reference section to original papers. The information is arranged according to chapter.

Pediatric Medical Emergencies is fit for its intended purpose. The more commonly encountered problems are well covered in a step-wise fashion which facilitates speedy coverage and will be a useful addition to a "Ready" library of the physician who may at any time deal with infants and children.—*Ben C. Pendarvis, M.D.*

**TEXTBOOK OF OTOLARYNGOLOGY.** 3rd edition by David D. DeWeese and William H. Saunders. St. Louis: C. V. Mosby Company. 457 pages. \$11.50.

This textbook is designed primarily for the medical student and general practitioner. It has been reset in a two column format but the arrangement remains essentially the same as in the second edition which appeared in 1964. The first chapter deals with the details of the otorhinolaryngologic physical examination. Following this are chapters on disorders of the oral cavity, the pharynx, larynx, nose, and other parts of the respiratory tract. It contains 32 chapters. Some new material has been added to both the text and the illustrations. The index has been enlarged.

Medical students and physicians in fields outside of otolaryngology will find this a useful reference.—*Harris D. Riley, Jr., M.D.*

**GROWTH AND DEVELOPMENT OF CHILDREN.** Fifth edition. E. H. Watson and G. H. Lowrey. Chicago: Yearbook Publishers, 1967. \$9.75.

The first edition of this excellent book appeared in 1951. It deservedly goes into its fifth edition and should enjoy its usual warm welcome. This book is an encyclopedia of the knowledge of growth and development from the history of the first attempts at scientific study through hereditary factors and through the entire span of the developing individual to the point of

geriatrics. A listing of the chapter titles serves well to point out the tremendous amount of information covered in this volume:

1. History and introduction.
2. Hereditary and Environmental Factors.
3. The Placenta and Fetal Development.
4. Normal Physical Measurements.
5. Premature and Low Birth Weight Infants.
6. Behavior and Personality.
7. Organ Development.
8. Osseous Development.
9. Role of the Endocrine Glands in Normal Growth and Development.

10. Energy Metabolism.
11. Nutrition in Normal Growth.
12. Facial Growth and Dentition.
13. An Outline of Abnormal Growth.

This edition adds a brief historical introduction, an extensive revision of the sections on heredity and on the development of immunity. The final chapter entitled "An Outline of Abnormal Growth" has been largely rewritten in an attempt to make it more useful to the clinician.

This book is a "must" for all pediatricians and should be available to all physicians who care for children.—*H. D. Riley, Jr., M.D.*

## Miscellaneous Advertisements

**PATHOLOGY RESIDENCIES AND INTERNSHIPS** available in 600-bed general hospital. Fully approved four-year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns — \$6300; residents — \$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

**MEDICAL PRACTICE** (office and equipment) for sale. Three-girl office with six rooms. Practice established for 23 years. Located in Northeast Oklahoma, Hominy is now building a 26-bed hospital. One other M.D. who will assist in taking calls. Contact Vincent Mazzarella, M.D., 918 885-2622 or 885-4750.

**CLINICAL BUILDING**, fully equipped for rent. One block from 100-bed, accredited, open-staff hospital. Ample off-street parking. Only five general practitioners in community. Contact R. G. Obermiller, M.D., Lakeview Drive, Woodward, Oklahoma.

**IMMEDIATE POSSESSION** of my office and equipment. Reasonable basis. Long-established practice. Western Oklahoma town with large trade area. Contact Key K, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

**WANTED: DOCTORS** to do coverage of a large emergency room in a large urban hospital. If interested, please contact: Joe M. Parker, M.D., Director of Medical Education, Saint Anthony Hospital, 601 N.W. 9th, Oklahoma City, Oklahoma 73102.

**FOR SALE:** 440 N.W. 15th Street. One of Oklahoma City's most beautiful homes at one-third of cost, five bedrooms, five baths, two half baths, large living, club and dining rooms, central air and heat, two log fires. JA 4-8545, Broker.

**DISTRICT and EMERGENCY ROOM PHYSICIANS.** The Amarillo Hospital District has positions open for District and Emergency Room physicians. We operate a 275-bed general hospital and a 100-bed adult psychiatric hospital. Compensation is open and may be engaged on a retainer or contractual basis. Contact: Mr. Don Pipes, Personnel Director, Northwest Texas Hospital, P.O. Box 1110, Amarillo, Texas 79105.

**ANESTHESIOLOGY RESIDENCIES** available—Fully approved two-year program in 600-bed general hospital includes neurosurgery, thoracic, and cardiovascular surgery. Annual anesthetics administered—over 13,000. Stipend—\$8100 and \$9300. Board and laundry. A. N. Heinrichs, M.D., Director, Department of Anesthesia, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104. □



STANDARD CLAIM FORM

APPROVED BY THE OKLAHOMA STATE MEDICAL ASSOCIATION AND THE ASSOCIATION OF HEALTH AND ACCIDENT INSURORS OF

INSURANCE COMPANY ADDRESS

TO: ATTENDING PHYSICIAN'S REPORT

1. PATIENT'S NAME 2. ADDRESS

4. DIAGNOSIS (EXPLAIN COMPLICATIONS)

5. ADDITIONAL DIAGNOSES (CHRONIC DISEASE OR DEFECT FOUND DURING PREVIOUS

6. DATE OF ONSET 7. DATE FIRST CONSULTED 8. DUE TO PREGNANCY? YES NO

11. SURGICAL OR OBSTETRICAL PROCEDURES (DESCRIBE)

12. IF HOSPITALIZED, NAME AND ADDRESS OF HOSPITAL

15. NAME AND ADDRESS OF OTHER PHYSICIAN

COMPLETE IF PATIENT

16. TOTAL DISAP

FROM

17. P

PLEASE ATTACH TO COMPLETED INSURANCE CLAIM FORM

STANDARD INSURANCE REPORTING FORMS For Oklahoma Physicians

STATEMENT FOR PROFESSIONAL SERVICES RENDERED

APPROVED BY THE OKLAHOMA STATE MEDICAL ASSOCIATION

PHYSICIAN'S NAME PATIENT'S NAME ADDRESS

COMPLETE FOR MEDICAL CARE ONLY: AT HOSPITAL, HOME, OR OFFICE GIVE THE DATES OF TREATMENT BY INSERTING MONTH AND YEAR. INDICATE EACH H—HOSPITAL V—HOME O—OFFICE OR CLINIC

MONTH AND YEAR	1	2	3	4	5	6	7	8	9	10	11	12

Form 102 STATEMENT FOR PROFESSIONAL SERVICES RENDERED

1 Pad . . . . \$ .80 (50 Forms)  
3 Pads . . . . 2.25 (150 Forms)  
6 Pads . . . . 4.35 (300 Forms)  
12 Pads . . . . 7.70 (600 Forms)

Plus Oklahoma Sales Tax. Remit with order and postage will be paid.

PLEASE STATE YOUR

HOSPITAL

Form 101 STANDARD CLAIM FORM

1 Pad . . . . \$ .70 (50 Forms)  
3 Pads . . . . 1.95 (150 Forms)  
6 Pads . . . . 3.75 (300 Forms)  
12 Pads . . . . 6.60 (600 Forms)

SAMPLE FORMS SENT ON REQUEST

OSMA APPROVED

Prepared by the Insurance Committee of the Oklahoma State Medical Association these forms are designed to simplify this tedious office procedure. FORM 101, Standard Claim Form and FORM 102 Statement for Professional Services Rendered are available immediately in pads of 50. See price list below and order now . . . use the handy order form.

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Enter our order as listed on the left and ship to the address below.

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FORM 101 Pads FORM 102 Pads

Check Enclosed Amount Bill Me

Signature

Address

City



## Proceedings

Continued from page 307

Walter E. Brown, M.D., Tulsa, Chairman of the Advisory Committee on Medical Care for Public Assistance Recipients, was presented to the House of Delegates. He commended Don Blair, OSMA Executive Director and President Scott Hendren for their regular attendance at his committee meetings. He reviewed the methodology of retroactively paying hospitals for their audited costs. He stated hospitals are now paid a per diem rate based on 110 percent of last year's costs; if at the end of the year payments do not cover the hospital's audited costs, adjustment will be made. In compliance with the request of the OSMA, he said the committee has tried to keep payment of physicians' charges under the usual, customary and reasonable fee concept, and to reduce the scope of services rather than fees. Accordingly, it has been necessary to reduce services in the areas of x-ray, EKG, physical therapy, and to limit hospital days and nursing home care.

Don H. O'Donoghue, M.D., Chairman of the Advisory Committee on Medical Care for Crippled Children Committee, was introduced. He observed that traditionally physicians have cared for crippled children without payment for their services, but with the enactment of Medicare in 1966, payment for physicians' services was begun. He expressed concern for the actuarial soundness of the program. There has been a marked increase in the number of children receiving medical care, and the Department has been unable to cut down on the number of recipients, because there are no provisions in the regulations governing the program to permit the Department to investigate the eligibility of a recipient. Moreover, to add to the financial dilemma, the program was broadened a year ago to include dental care.

The Speaker next introduced Mr. Lloyd Rader, Director of the Department of Public Welfare. On behalf

of the government and the Department of Public Welfare, Mr. Rader expressed appreciation for the cooperation and guidance shown them by the Oklahoma State Medical Association in administering the Medicare and Medicaid programs.

Regarding the recent Supreme Court decision concerning the residency requirements under the Medicare law, he commented that the decision, if not repealed, will increase the cost of Medicare in Oklahoma at least \$1 million annually. He stated that the five states involved in the litigation (California, Connecticut, New York, Pennsylvania, and Washington, D. C.) have until today (May 16), to file their appeals. He announced the Department of Health, Education and Welfare has appointed an ad hoc committee to study the payment of physicians' fees. He observed that the committee was considering the possibility of paying physicians for their charges on a fixed fee basis. He also informed the Delegates that the Senate Finance Committee was studying over utilization of the Medicare programs.

### REMARKS OF THE SPEAKER:

Members of the House of Delegates of the Oklahoma State Medical Association and Guests:

It is my pleasure to welcome you to this 63rd annual session of our organization and to serve as your Speaker. Our goal is, as usual, to add to our fund of knowledge, transact necessary business, become better acquainted with our fellow physicians, and to enjoy the social events that have been so carefully planned.

It is encouraging to note that almost 97 percent of the physicians who were asked to serve on committees accepted. This is a healthy sign for the welfare of this group. Delegates and members are urged to attend the hearings of the reference committees and to join in the discussion. It can be a rewarding experience.

Each year the programs improve and member-participation becomes more active. Each year new problems of medicine show their faces. Many of these problems will be

discussed before the reference committees. For those of you who have opinions on a given subject, this is your opportunity to express them and to give vent to your feelings.

During the 1969 session of the Southeastern Conference of Speakers, which was held in Atlanta on February 9th and 10th, it was suggested that the various states consider changing from Robert's Rules of Order to Standard Code of Parliamentary Procedure by Alice Sturgis. The Sturgis version is said to have greater clarity of thought and to be more in keeping with the times. Your speaker knows of no effort in this organization to make this change.

Our society owes a debt of gratitude to those who are serving on the reference committees. This assignment is a challenge; making decisions does not always win friends. Let us also give due recognition to the program committee, whose work is often taken for granted. To all members of other committees we extend sincere thanks and appreciation for it is the sum total of the efforts of many that make any meeting worthwhile.

### ANNOUNCEMENTS:

The Speaker made the following announcements:

1. The 64th Annual Meeting will be held in Oklahoma City's Skirvin Hotel Convention Center, May 14-17, 1970.

2. It is hoped that the House will complete the Opening Session by noon, to permit delegates to attend the free Picnic Luncheon and the afternoon scientific programs.

3. Reference Committees will meet at 4:00 p.m., this afternoon, here in the Assembly Center.

### APPROVAL OF THE MINUTES

The Speaker asked the pleasure of the House regarding the reading of the minutes of the last annual meeting.

*Doctor C. Riley Strong moved to dispense with reading the minutes and that they be approved as published in the Journal of the Oklahoma State Medical Association. Doctor Samuel R. Turner seconded the motion and it carried.*



## RECESS FOR TRUSTEE DISTRICTS CAUCUSES

Doctor Hodgson announced the House would recess for ten minutes to allow Trustee Districts I, III, and XI through XIV to caucus. The House recessed at 10:50 a.m. and reconvened at 11:00 a.m.

The Speaker recognized Mr. Don Blair, OSMA Executive Director, who informed the delegates that due to good loss experience, the association's carrier, Insurance Company of North America, has declared a dividend. Checks are now being prepared for distribution and will be mailed as soon as possible to physicians participating in the association-approved professional liability program. He called attention to the malpractice booklet "Professional Liability Medical-Legal Guide for Physicians", and commented that the guide was written by Ed Kelsay, Associate Executive Director, who is also an attorney. The booklets will be distributed to members of the association on a statewide basis in the near future.

## NOMINATIONS OF OFFICERS

The House was declared open for the nominations for the position of PRESIDENT-ELECT (One year term of office).

*Ed L. Calhoon, M.D.*, Beaver, was nominated by Samuel R. Turner, M.D., Tulsa.

Nominations were declared closed.

Nominations were declared open for the position of VICE-PRESIDENT (One year term of office).

*Edward K. Norfleet, M.D.*, Tulsa, was nominated by Harlan Thomas, M.D., Tulsa.

Nominations were declared closed.

Nominations were declared open for the position of DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION (Two year term of office).

*F. W. Hollingsworth, M.D.*, El Reno, nominated *Malcom E. Phelps, M.D.*, El Reno.

*James W. McDoniel, M.D.*, Chickasha, nominated *B. C. Chatham, M.D.*, Chickasha.

Nominations were declared closed.

Nominations were declared open for the position of ALTERNATE DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION (Two year

term of office).

*S. N. Stone, M.D.*, Oklahoma City, nominated *Thomas C. Points, M.D.*, Oklahoma City.

Nominations were declared closed.

Nominations were declared open for TRUSTEE and ALTERNATE TRUSTEE for the following Trustee Districts (Three year term of office):  
**DISTRICT XI:**

Reporting on the caucus of representatives from District XI, Doctor Rhea made the following nominations:

*Thomas E. Rhea, M.D.*, Idabel, was nominated for the position of Trustee and *Bill E. Woodruff, M.D.*, Hugo, was nominated for the position of Alternate Trustee.

**DISTRICT XII:**

*Roger Reid, M.D.*, Ardmore, nominated *Orange M. Welborn, M.D.*, Ada, for the position of Trustee and *Frank W. Clark, M.D.*, Ardmore, was nominated for the position of Alternate Trustee.

**DISTRICT XIII:**

*William A. Matthey, M.D.*, Lawton, nominated *W. R. Cheatwood, M.D.*, Duncan, for the position of Trustee, and *John T. Hicks, M.D.*, Lawton, for the position of Alternate Trustee.

*Wayne A. Starkey, M.D.*, Altus, nominated *C. L. Tefertiller, M.D.*, Altus, for the position of Trustee and *Fred W. Sellers, M.D.*, Mangum, for the position of Alternate Trustee.

**DISTRICT I:**

Since Doctor Allensworth was appointed by the Board of Trustees to serve as Alternate Delegate for his district until the next annual meeting, *John R. Reid, M.D.*, of Nowata, nominated *Edward W. Allensworth, M.D.*, Vinita to serve as Alternate Trustee for the remainder of the unexpired term (length of unexpired term - one year).

**DISTRICT III:**

Due to the resignations of *Avery B. Wight, M.D.*, Enid, and *Webber W. Merrell, M.D.*, Guthrie, *Paul H. Rempel, M.D.*, Enid, nominated *John A. McIntyre, M.D.*, Enid, for the position of Trustee and *Robert J. Hogue, M.D.*, Guthrie, for position of Alternate Trustee.

The Speaker declared all nominations closed.

## REPORT OF THE PRESIDENT

Doctor Scott Hendren, gave his report and it was referred to Reference Committee No. I (A copy of the report is attached and made a part of the minutes).

## REPORT FROM THE BOARD OF TRUSTEES

Since the Board of Trustees Report is included in the delegates' portfolios, Doctor Samuel R. Turner, Chairman of the Board, read only the Board's Supplemental Report; both reports were referred to Reference Committee No. 1 (A copy of the report is attached and made a part of the minutes).

## REPORT OF THE SECRETARY-TREASURER

*Stanley R. McCampbell, M.D.*, Secretary-Treasurer, reviewed his report and it was referred to Reference Committee No. I. (Copy attached and made a part of the minutes.)

## COUNCIL AND COMMITTEE REPORTS

The Speaker stated that the House of Delegates will receive the following reports and they are referred to the designated reference committees (Copies of all reports are attached and made a part of the minutes).

*Committee on Planning*, *Maxwell A. Johnson, M.D.*, Chairman, referred to Reference Committee No. I.

*Appropriations and Audit Committee*, *C. Riley Strong, M.D.*, Chairman, referred to Reference Committee No. I.

*Annual Meeting Committee*, *Lucien M. Pascucci, M.D.*, Chairman, referred to Reference Committee No. 1.

*Financial Aid to Education Committee*, *Maxwell A. Johnson, M.D.*, Chairman, referred to Reference Committee No. I.

*Grievance Committee*, *Joe L. Duer, M.D.*, Chairman, referred to Reference Committee No. I.

*Medical School Liaison Committee*, *C. Riley Strong, M.D.*, Chairman, referred to Reference Committee No. I.

*Council on Insurance*, *C. E. Woodward, M.D.*, Chairman, referred to Reference Committee No. IV.

*Council on Professional Education*, *John W. Drake, M.D.*, Chairman,



referred to Reference Committee No. I.

*Council on Professional and Inter-vocational Relations*, Orange M. Welborn, M.D., Chairman, referred to Reference Committee No. II.

*Council on Public Health*, Hayden H. Donahue, M.D., Chairman, referred to Reference Committee No. IV.

*Council on Public Policy*, Rex E. Kenyon, M.D., Chairman, referred to Reference Committee No. II.

*Council on Socio-Economic Activities*, B. C. Chatham, M.D., Chairman, referred to Reference Committee No. III.

*Report of the Constitution and By-laws Committee*, George H. Garrison, M.D., Chairman, referred to Reference Committee No. I.

#### INTRODUCTION OF

#### RESOLUTIONS:

The Speaker announced that Resolutions Numbers 1 through 7 would be introduced by "Title" and "Resolve," referred to the designated reference committee and acted upon in the Closing Session of the House of Delegates:

*Resolution No. 1.*, entitled "Optional AMA Membership," was introduced by David C. Ramsay, M.D., Ada, and referred to Reference Committee No. I.

*Resolution No. 2.*, entitled "Administrative Demands of Government," was introduced by Frank C. Lattimore, M.D., Kingfisher, and referred to Reference Committee No. III.

*Resolution No. 3.* entitled "Treatment of Minors with Venereal Disease," was read by Homer D. Hardy, M.D., Tulsa, and referred to Reference Committee No. IV.

*Resolution No. 4.* entitled "Rural Medical Scholarship Program," was read by David Bickham on behalf of the OSMA State Legislative Committee, and referred to Reference Committee No. IV.

*Resolution No. 5.* entitled "Preservation of Medicaid System," was read by Don Blair on behalf of the authors, and referred to Reference Committee No. III.

*Resolution No. 6.* entitled "Amendments of the Bylaws of the Okla-

homa State Medical Association to Remove the Requirement for Compulsory Membership in the American Medical Association," was read by Donald W. Bobek, M.D., Tulsa, and referred to Reference Committee No. I.

*Resolution No. 7.* entitled "Federal Medical Evaluation Board," was read by Francis A. Davis, M.D., Shawnee, and referred to Reference Committee No. III.

#### REFERENCE COMMITTEE MEETINGS

The Speaker urged all members of the OSMA to attend the Reference Committee Hearings, and announced the following meeting areas in the Tulsa Assembly Center:

Reference Committee No. 1 — Room 3-E

Reference Committee No. II — Room 4-E

Reference Committee No. III — Room 4-C-D

Reference Committee No. IV — Room 4-A-B

Doctor Hodgson announced a free picnic luncheon will be held on the stage in the exhibit area at noon.

The Speaker then called on Roger Reid, M.D., to read the Necrology Report. (A copy of the report is attached and made a part of the minutes.)

The Opening Session of the annual meeting was adjourned at 11:55 a.m.

#### CLOSING SESSION

#### CALL TO ORDER:

The Closing Session of the 63rd Annual Meeting of the House of Delegates was called to order by the Speaker, C.M. Hodgson, M.D., at 9:15 a.m., May 17, 1969, in the Tulsa Assembly Center, Tulsa, Oklahoma.

C. Riley Strong, M.D., Chairman of the Credentials Committee, announced a quorum present.

#### REFERENCE COMMITTEE REPORTS:

(All reports considered by the House of Delegates are attached as approved and made a part of these minutes.)

#### Report of

#### Reference Committee No. I

Presented by: Bob J. Rutledge, M.D., Oklahoma City, Chairman.

Mr. Speaker and Members of the House of Delegates, your reference

committee gave careful consideration to the items referred to it and makes the following report:

#### Item I. Grievance Committee.

The committee recommends the approval of this report in its entirety.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

#### Item II. President's Report.

Your committee recommends the approval of this report; and, on behalf of the entire medical profession, extends its sincere appreciation for the splendid representation provided by Doctor Hendren during his term of office.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

#### Item III. Financial Aid to Education.

Your committee recommends approval of this report with the following exception:

The recommendation should read as follows:

"It has been suggested by the Appropriations and Audit Committee that we discontinue the scholarship program in favor of loans, and this will be studied during the ensuing months."

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

#### Item IV. Constitution and Bylaws Committee.

Your committee recommends the approval of this report.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

#### Item V. Medical School Liaison Committee.

Your committee recommends approval of this report.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

#### Item VI. Council on Professional Education.

Your committee recommends approval of Sections II and III of this report, as presented, including the special report regarding the Oklahoma State Medical Assistants Society.

With respect to Section I, your reference committee does not feel



that it is the place of the House of Delegates to specifically formulate procedures for the postgraduate education of Oklahoma physicians. Therefore, your committee recommends that the three recommendations contained on page 3 of the report be stricken in their entirety and that the following statement be substituted therefor:

"The continuing education of physicians has and continues to be a primary mission of the Oklahoma State Medical Association, and the Council on Professional Education has the responsibility of developing new and improved techniques of communication to keep the medical profession abreast of the dynamic changes in medical science. Continuing study should be given by the council toward innovations which will improve the quality of instruction and the quantity of participating physicians."

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item VII. Annual Meeting Committee Report.*

Your committee recommends approval of this report.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item VIII. Committee on Planning.*

Your committee recommends the approval of this report.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item IX. Appropriations and Audit Committee.*

In general, your committee recommends the adoption of this report, with the following amendments:

1. On page 3, strike the next to the last paragraph in its entirety.

2. On page 4, your committee recommends that the first paragraph under the heading "Recommendation" be stricken in its entirety.

3. On page 4, in the second paragraph under the heading "Recommendation," your committee recommends the deletion of the second sentence and the insertion of the following substitute sentence:

"The necessary expansion of our

headquarters building, necessary salary increases and growing operating costs, and losses incurred by the State Journal are reasons for our recommendation on the passage of a dues increase."

4. Your committee recommends the deletion of the last paragraph which begins on page 4 and concludes on Page 5.

5. Your committee supports the final recommendation of the Appropriations and Audit Committee as presented on page 5 of the committee's report.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item X. Report of the Board of Trustees.*

Your committee recommends the approval of this report.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item XI. Supplemental Report of the Board of Trustees.*

In general, your committee recommends approval of this report, with the following exception:

Regarding Item I, on page 4, your committee recommends that the last two sentences of this paragraph be stricken, and that the following sentences be substituted therefor:

"There are several possibilities and alternatives to satisfactorily schedule the 1971 annual meeting in either Oklahoma City or Tulsa. However, the matter needs further investigation and the Board of Trustees requests the authority of the House of Delegates to make suitable arrangements following a more thorough investigation."

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item XII. Secretary-Treasurer's Report.*

Your committee recommends approval of the report.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item XIII. Resolution No. 1.*

Your committee is in general sympathy with the intent of this resolution, but does not concur entirely with the statements of justi-

fication presented in the first five paragraphs, and believes that the paragraphs would contribute toward a bias referendum of the medical profession of Oklahoma. Therefore, your committee recommends that the first five paragraphs be stricken and that the resolution commence with the sixth "WHEREAS."

Further, your committee believes that a double postcard would be inadequate to present a referendum to the association since there would not be space for pro and con arguments concerning the mandatory payment of AMA dues. Your committee recommends, therefore, that the first "Resolve" be amended to read as follows:

"NOW, THEREFORE, BE IT RESOLVED, that the Executive Committee of the OSMA solicit pro and con statements of equal length, one from a delegate to the AMA and one from the author of Resolution No. 1, and that these be mailed to all OSMA members with a covering letter and with a reply card ballot as to their desire to continue or to discontinue mandatory membership in the AMA."

In keeping with the preceding amendment, it is further recommended that the second "Resolve" on page 2, be amended to read as follows:

"BE IT FURTHER RESOLVED, that the correspondence be mailed prior to August 1, 1969, and the results, as tabulated by the Executive Committee, be announced in association publications prior to October 1, 1969."

Your committee recommends approval of the final paragraph of this resolution.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Item XIV. Resolution No. 6.*

Because your reference committee supports the general concept of Resolution No. 1, and since Resolution No. 1 calls for a referendum of the entire membership regarding the question of optional AMA dues, your committee recommends disapproval of Resolution No. 6, because it feels that such immediate action is premature at this time.



Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

Mr. Speaker, I move the adoption of this report as a whole. The motion was seconded and carried.

#### REPORT OF

#### REFERENCE COMMITTEE NO. II.

Presented by: Duane E. Brothers, M.D., Tulsa, Chairman.

Mr. Speaker and Members of the House of Delegates, your reference committee gave careful consideration to the items referred to it and makes the following report:

*Item I. Report of the Council on Professional and Intervocational Relations.*

##### Section I. The Council.

Your committee recommends approval of this section of the report with the following amendment:

On page 3, paragraph 2, replace the last word in the paragraph with the words "current policy."

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Section II. Committee on Cults and Quackery.

On page 5, in the last line of the page, change the word "each" to the word "some."

Referring to Recommendation No. 3 on page 7, change the last word of the recommendation "departments" to the word "programs."

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Section III. Medical-Legal Relations Committee.

Your committee recommends approval of this section of the report.

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Section IV. Committee on Medicine and Religion.

Your committee recommends that Recommendation No. 2 on page 9, be amended by changing the word "necessary" to the word "helpful."

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Section V. Committee on Nursing.

Your committee recommends approval of this section of the report.

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Section VI. Committee on Osteopathy.

Your committee recommends the approval of this section of the report with the following amendments:

Change paragraph 4, on page 11, to read:

"Each individual medical doctor may make his own evaluation of the individual osteopaths with whom he comes in contact under those conditions set forth in Recommendation No. 2, on page 14 of this report. The primary concern must be the welfare of the patient."

Amend paragraph 5, on page 12, to read as follows:

"Since osteopaths number more than 400 in Oklahoma — far more than our share of the national total of some 13,000—the OSMA should look forward to a possible amalgamation and a discontinuation of further osteopathic licensure. Moreover, an evolution in osteopathy may be taking place which merits our attention since schools of osteopathy may be tending to emulate medical education."

Amend paragraph D on page 13 to read:

##### "D. Licensure:

"It appears that a key step toward developing uniform standards of professional competency might be the creation of a study committee for developing an equitable criteria for licensure for osteopathic physicians for the simple reason that the tests must be the same for medical doctors and osteopaths if the term 'physician and surgeon' is to be meaningful to the public."

Delete the following paragraph (paragraph 3, page 13).

Your committee recommends disapproval of Recommendation No. 1. (Delete Recommendation No. 1 and renumber the following recommendations.)

Amend Recommendation No. 7. on page 15 to read as follows:

"It is recommended that the

Committee on Osteopathy schedule a series of meetings with the State Board of Medical Examiners and OSMA Legislative Committee to determine the feasibility of recommending new legislation for licensure."

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Section VII. Committee on Pharmacy.

Your committee recommends approval of this section of the report.

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Item II. Council on Public Policy.

Your reference committee recommends approval of this report as written.

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

Mr. Speaker, I move the adoption of this report as a whole. The motion was seconded and carried.

#### REPORT OF

#### REFERENCE COMMITTEE NO. III.

Presented by: Richard W. Loy, M.D., Pawhuska, Chairman

Mr. Speaker and Members of the House of Delegates, your reference committee gave careful consideration to the items referred to it and makes the following report:

##### Item I. Resolution No. 5

Your committee recommends approval of Resolution No. 5 with the following amendment:

Paragraph 3, lines 1 and 2, after the word "Department," strike the words "be supported in continuing to provide" and substitute the words "continue to pay for"; and after the word "care" substitute the word "of" for the word "to." Omit the period on line 4 and add "as determined under the usual, customary and reasonable method of payment."

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.

##### Item II. Resolution No. 2.

Your committee recommends adoption of Resolution No. 2.

Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.



*Item III. Resolution No. 7.*

In that this bill will not be considered until next year, your committee recommends that a further study be made with reference to:

A. Separate enforcement and approval of drugs.

B. Qualifications and/or makeup of an advisory evaluation panel.

*Mr. Speaker, I move adoption of this portion of the report.*

*Doctor Francis A. Davis moved to amend the reference committee's report to reflect that the intent of the resolution be approved; and further, recommend that the House of Delegates refer the resolution to the AMA House of Delegates for consideration. Doctor Harlan Thomas seconded the amendment and it carried.*

*Mr. Speaker, I move the adoption of this portion of the report as amended. The motion was seconded and carried.*

*Item IV. Council on Socio-Economic Activities.*

Your committee recommends approval of the Report of the Council on Socio-Economic Activities with the following amendment:

Under recommendations of the Medical Insurance Review Committee, page 13, number 4, insert a period after the word "specialist," strike the remainder of the sentence and add a new sentence as follows: "It is further recommended that the medical profession be allowed to determine the qualifications of a specialist in any medical field."

In view of the fact that the council as now set up has not met with any regularity and the reports are written without council meetings, we recommend that the councils in the future be made up only of the chairman of each of the constituent committees with one additional member as chairman of the council.

*Mr. Speaker, I move the adoption of this portion of the report. The motion was seconded and carried.*

*Mr. Speaker, I move adoption of the report as a whole. The motion was seconded and carried.*

**REPORT OF  
REFERENCE COMMITTEE NO. IV.**

Presented by: Thomas E. Rhea, M.D., Idabel, Chairman.

Mr. Speaker and Members of the House of Delegates, your reference committee gave careful consideration to the items referred to it and makes the following report:

*Item I. Council on Public Health Report.*

Your committee recommends approval of the Council on Public Health Report with the following amendment:

On page 3, after paragraph 2, insert the following:

*"Recommendation:*

*"In view of the concern of organized medicine regarding the hazards of smoking to health, it is recommended that the House of Delegates review its position on permitting tobacco companies to exhibit at the OSMA annual meetings."*

*Mr. Speaker, I move adoption of this portion of the report. The motion was seconded and carried.*

*Item II. Report of the Council on Insurance.*

The committee recommends approval of the Report of the Council on Insurance.

*Mr. Speaker, I move adoption of this portion of the report. The motion was seconded and carried.*

*Item III. Resolution No. 3.*

The committee recommends the adoption of Resolution No. 3, with the following amendment:

On page 2, paragraph 1, omit the period and add the words "or notification" after the word "consent."

*Mr. Speaker, I move the adoption of this portion of the report.*

*Doctor Clarence Robison moved to amend the reference committee's report by inserting the words "examine and/or" between the words "to treat" and insert the word "suspected" between the words "with venereal" in the next to the last line of the resolution. The motion was seconded by Doctor Orange M. Welborn and carried.*

*Mr. Speaker, I move the adoption of this portion of the report as amended. The motion was seconded and carried.*

*Item IV. Resolution No. 4.*

The committee recommends the adoption of this resolution.

*Mr. Speaker, I move the adoption of this portion of the report. The*

*motion was seconded and carried.*

*Mr. Speaker, I move the adoption of the report as a whole. The motion was seconded and carried.*

*Doctor Malcom E. Phelps moved to commend members of the reference committee for their diligent work in preparing the committee reports for presentation to the House of Delegates. Doctor Jack L. Richardson seconded the motion and it carried.*

Doctor H. K. Speed, Sayre, OSMA Past-President, was introduced by the Speaker. Doctor Hodgson commented that after 62 years, Doctor Speed retired from the practice of medicine on May 1, 1969. He observed that Doctor Speed attended 44 of the past 45 annual meetings and has been very active in the various activities of the OSMA. Although Doctor Speed did not wish to make a speech, the Speaker, on behalf of the House of Delegates, commended him for the many contributions he has made to organized medicine. Doctor Speed received a standing ovation.

**ELECTION OF OFFICERS:**

The Speaker announced that the following officers are elected by acclamation:

*President-Elect:* Edward L. Calhoon, M.D., Beaver

*Vice-President:* Edward K. Norfleet, M.D., Tulsa

*Alternate Delegate to the AMA:* Thomas C. Points, M.D., Oklahoma City

*Delegate to the AMA:* A ballot vote was taken on the contested position of AMA Delegate and Malcom E. Phelps, M.D., El Reno, was elected.

**ELECTION OF TRUSTEES  
AND ALTERNATE TRUSTEES:**

The Speaker then announced that the following Trustees and Alternate Trustees are elected by acclamation:

*Trustee District No. I:* (Craig, Delaware, Mayes, Nowata, Ottawa, Rogers and Washington Counties)  
*Alternate Trustee:* Edward W. Allensworth, M.D., Vinita (To fill unexpired term of Jess D. Green, M.D.)

*Trustee District No. III:* (Garfield, Grant, Kingfisher and Logan Counties)



*Trustee:* John A. McIntyre, M.D., Enid (To fill unexpired term of Avery B. Wight, M.D.)

*Alternate Trustee:* Robert J. Hogue, M.D., Guthrie (To fill unexpired term of Webber W. Merrell, M.D.,)

Trustee District No. XI: Atoka, Bryan, Choctaw, Coal, McCurtain and Pushmataha Counties)

*Trustee:* Thomas E. Rhea, M.D., Idabel

*Alternate Trustee:* Bill E. Woodruff, M.D., Hugo

Trustee District No. XII: (Carter, Garvin, Johnston, Love, Marshall, Murray and Pontotoc Counties)

*Trustee:* Orange M. Welborn, M.D., Ada

*Alternate Trustee:* Frank W. Clark, M.D., Ardmore

Trustee District No. XIII: (Caddo, Comanche, Cotton, Grady, Jefferson and Stephens Counties)

*Trustee:* William R. Cheatwood, M.D., Duncan

*Alternate Trustee:* J. T. Hicks, M.D., Lawton

Trustee District No. XIV: (Greer, Harmon, Jackson, Kiowa, Tillman and Washita Counties)

*Trustee:* C. L. Tefertiller, M.D., Altus

*Alternate Trustee:* Fred W. Sellers, M.D., Mangum

The Speaker recognized Doctor Hildard E. Denyer, OSMA's newly elected President.

Regarding an interview concerning over utilization of the Medicaid program, Doctor Denyer expressed regret that he had been misquoted by the press, and apologized to the rural Oklahoma physicians for the unfortunate incident.

The 63rd annual meeting of the House of Delegates adjourned at 10:25 a.m.

Recorded by Martina Doyle

#### NECROLOGY REPORT

1968 - 1969

James S. Boyle, M.D., Oklahoma City

Samuel J. Bradfield, M.D., Tulsa

C. B. Dawson, M.D., Oklahoma City

Carl R. Earnest, M.D., Oklahoma City

Lawrence W. Ferguson, M.D., Lawton

Raymond C. Gentry, M.D., Bartlesville

Joseph Geyer, M.D., Mooreland

Lloyd P. Hetherington, M.D., Miami

Jacob R. Hinshaw, M.D., Norman

Wann Langston, M.D., Oklahoma City

Webb P. Lawton, M.D., El Reno

Wilbert F. Lewis, M.D., Lawton

Ralph W. Morton, M.D., Sulphur

Milton A. Neumann, M.D., Okarche

Ben H. Nicholson, M.D., Oklahoma City

Ray U. Northrip, M.D., Ada

Ralph E. Payne, M.D., Edmond

John W. Pendleton, M.D., Kingfisher

James C. Peters, M.D., Tulsa

O.S. Somerville, M.D., Bartlesville

Luther J. Spickard, M.D., Okemah

Cecil R. Stansberry, M.D., Oklahoma City

Carl T. Steen, M.D., Norman

Robert J. Stillwell, M.D., Oklahoma City

Leon H. Stuart, M.D., LaCrecenta, California

John R. Taylor, M.D., Kingfisher

Marvin S. Terrell, M.D., Fairfax

Thomas B. Triplett, M.D., Mooreland

James P. Vansant, M.D., Dewey

Harold B. Witten, M.D., Fort Supply

#### Report of the GRIEVANCE COMMITTEE (APPROVED)

##### *Committee Members*

Joe L. Duer, M.D., Woodward, Chairman

Harlan Thomas, M.D., Tulsa

Rex E. Kenyon, M.D., Oklahoma City

Ennis M. Gullatt, M.D., Ada

Maxwell A. Johnson, M.D., Tulsa

The Grievance Committee had a light year as far as dealing with cases where the OSMA had primary jurisdiction. A number of other cases were received at the association office, but were referred to the Boards of Censors of the appropriate county medical societies.

Two cases were considered at the state association level. Both were of a complicated nature to the extent that precise determinations could not be made as to ethical violations. However, in both instances, the cases are still under surveillance in the

event our counselling did not suffice and further action is necessary.

#### Report of the PRESIDENT

(APPROVED)

Mr. Speaker, Members of the House of Delegates:

A chronology of the events of this past year delivered at this time would preclude any further business by this House. It has indeed been a full, rewarding and sobering year. Full, in that the problems and challenges met by your society have been myriad; rewarding, in the manner in which the membership of your society has responded to the tasks presented; sobering, in the realization that our profession and this society have yet to face far greater demands, more serious problems, and more trying challenges.

Your councils and committees have done yeoman work and the record of their accomplishments and deliberations is submitted to you in their various reports. I would only point out that no document can convey the dedicated effort of your many colleagues in their service to our society.

It has been my great privilege during this term in office to visit with most of the societies in our association.

The work here recorded is magnified many times in the functioning of each of your component societies throughout the state.

A very meaningful view of the activities of this association could be gleaned from a glimpse at the desk calendars of your executive director, his associates, and the staff. Here one sees dedication above and beyond any possible remuneration with meeting after meeting and conference after conference sandwiched in to include nights, Sundays and even some holidays.

The devoted effort and unstinting investment in time by your executive staff is a matter of record. Their talent and ability can best be judged by comparison, and I submit that our association is indeed fortunate in having a staff without peer in all that I have encountered in the many



contacts across the land that this year as your President has afforded.

These then are some of the reasons that I can say with sincerity that this has been a rewarding year indeed.

It is then with the deepest humility that I tender to this House of Delegates my gratitude for the honor and privilege that you have afforded me in this office and to tell you that I leave it with a greater understanding of the responsibilities and responsiveness of our profession.

To reiterate, that a complete chronology of the year's events is impossible, I would like to dwell briefly on a few of the areas which will require our continued and particular effort and concern.

Among these are compensation for physicians' services, our continuing education as physicians, public information and education, governmental and sociologic demands and pressures, the need to continue to provide quality medical care in an increasingly complex society, the ever increasing responsibility of our association in all areas, and our need to express ourselves in citizenship.

This list does not represent a spectrum of all our tasks ahead, nor does it necessarily reflect those which may prove to be our greatest problems. I do believe they emphasize the point that our work has just begun, that the days ahead are not destined to be easy and that some stark and perhaps grim realities are to be dealt with by our profession and in fact by a citizenry of a great country who would do well to emulate the patriotism and responsibility demonstrated by the members of our association.

In the matter of physicians' compensation, this society has adopted the principle that usual, customary and reasonable is the preferable method of payment for compensation by third parties.

This association and the AMA have defined these terms and this definition has been adopted by Blue Shield and by others in the private sector. This definition is not currently being followed in regulations from

H.E.W. governing payments under Titles XVIII and XIX of Medicare.

Both Aetna and the Department of Public Welfare have protested these regulations to H.E.W., and I believe that they deserve our association's continued support and counsel in these efforts. The fact remains, however, that H.E.W. is even more misguided, more misdirected and more confused than ever. The counsel of medicine must be sought and accepted or chaos is inevitable.

If there are a few among our number who entertain a perverted view of the value of their services or seek to exploit their patients or over-utilize programs, they deserve our full attention.

Our claims review and grievance committees must continue to function and to improve their efficiency. Peer review remains a strong bastion of defense against the unwarranted accusations of the ill-informed and vicious who seek to discredit our profession as a means to regiment it and offers support to our conscientious membership.

The rapid expansion of medical knowledge and technology, as well as widespread dissemination of dramatic events in medicine, has helped create an unprecedented demand for medical services. The advent of governmental subsidy of the medical expense of a large segment of the population has fueled the demand for services unrelated to need.

We must continue and strengthen our own continuing education to improve our efficiency and knowledge and to combat a growing swell from Washington for Federal licensure or re-licensure regulated by non-professionals. We must expand our public information programs to help people recognize the realities of demand versus need and expectation versus reality. We must foster, strengthen, and further the cause of the private segments of the population in providing for their health care through the support of prepayment and private health insurance coverage. An adequate understanding on their part as to what constitutes good coverage is essential. We must consider it our responsibility to help make certain that their

health insurance dollar purchases a maximum of quality care in time of need.

Hope is fast fading that a new Administration faced with an unresolved, untenable war and flanked by an opposition Congress in both houses has neither the ability or inclination to do anything to limit the unrealistic governmental health programs. The action thus far is only to limit the funds for them, leaving the programs to be subsidized by the profession and by the hospitals and other health care facilities.

Our job here is two-fold: to inform the Administration in every way possible and to change the Congress at the polls.

In the area of community relations and citizenship, we have two great supporters whose work we cannot appreciate enough and upon whom we must increasingly rely in the attainment of the goals outlined. One is the Woman's Auxiliary to the OSMA, and the other is OMPAC. To review the contributions of the Auxiliary in their many projects would be the basis for another full report in itself. I can only say an inadequate "Thank You" and offer congratulations for tasks well done and pledge support for new responsibilities to be accepted.

The record of OMPAC is outstanding in its accomplishment. Our individual and personal help will be increasingly important. In this we must not fail.

This brief review of some of your association's activities serves as some indication that far greater tasks lie ahead. Our association must have even greater support and we must be willing to give even more freely of our time, our talents and our funds.

Our staff must be compensated for the work they do and our activities must be expanded. To fail to give this support is to negate the value of that which we hold so dear, our beloved profession.

I know that you and I will face the responsibilities and challenges with your incoming President, Doctor Hillard Denyer, and pledge increasing resolve and continued devotion.



Report of the  
FINANCIAL AID TO EDUCATION  
COMMITTEE

(APPROVED AS AMENDED)

Committee Members

Maxwell A. Johnson, M.D., Tulsa,  
Chairman

Ennis M. Gullatt, M.D., Ada

Scott Hendren, M.D., Oklahoma City

Mrs. Virgil Ray Forester, Oklahoma  
City

Rex E. Kenyon, M.D., Oklahoma  
City

H. E. Denyer, M.D., Bartlesville

A report on deposits and disburse-  
ments September, 1962 through May  
16, 1969, appears below:

INCOME

Deposits from

OSMA Dues ..... \$70,857.85

Interest Earned ..... 1,058.37

Loan Repayments ..... 2,461.84

TOTAL ..... \$74,378.06

EXPENSE AND  
COMMITMENTS

Scholarships

Awarded (40) ..... \$22,250.00

Loans Granted (99) ..... 43,050.00

TOTAL ..... \$65,300.00

BALANCE ..... \$ 9,078.06

During the past year the commit-  
tee approved 17 loans and five schol-  
arships were awarded to the follow-  
ing Freshmen on the basis of aca-  
demic achievement:

David Kahn

Michael E. Karasek

Georgene Schmeckpeper

Haskell Head

William W. Cook, III

Regarding the balance of \$9,078.06  
in the loan program, additional loan  
applications will be considered this  
summer for student use during the  
first semester of the 1969-70 aca-  
demic year.

Recommendation:

It has been suggested by the Ap-  
propriations and Audit Committee  
that we discontinue the scholarship  
program in favor of loans, and this  
will be studied during the ensuing  
months.

Report of the  
CONSTITUTION AND BYLAWS  
COMMITTEE

(APPROVED)

Committee Members

George H. Garrison, M.D., Oklahoma  
City, Chairman

Clinton Gallaher, M.D., Shawnee

Paul H. Rempel, M.D., Enid

Edward K. Norfleet, M.D., Tulsa

John W. Drake, M.D., Oklahoma City

Maxwell A. Johnson, M.D., Tulsa

Mrs. George Miller, Tulsa

SECTION I

ACTIVITIES

County Constitutions and Bylaws:  
The 1966 House of Delegates adopted  
an improved constitution and bylaws  
for the association. To implement

the new document throughout the  
levels of organized medicine, the  
House asked all county medical so-  
cieties to revise or prepare new con-  
stitutions and bylaws to be in gen-  
eral conformity with those of the  
OSMA. The OSMA Constitution and  
Bylaws Committee circulated a mod-  
el constitution and bylaws to county  
societies to aid them in carrying out  
this directive.

During the past three years re-  
peated mailings have been made to  
county medical society presidents  
urging them to adopt new and com-  
patible documents. Out of a total  
of 45 county medical societies, 11  
still have not filed new documents  
with the OSMA office.

SECTION II

Recommendations:

1. The following county or district  
medical societies have filed com-  
patible constitutions and bylaws with  
the OSMA, and it is hereby recom-  
mended that the House of Delegates  
issue new letters of charter to each  
society recognizing its compliance  
with the 1966 directive:

Canadian County

Carter-Love-Marshall County

Cleveland-McClain County

Craig-Delaware-Ottawa County

Creek County

East Central Oklahoma (Muskogee,

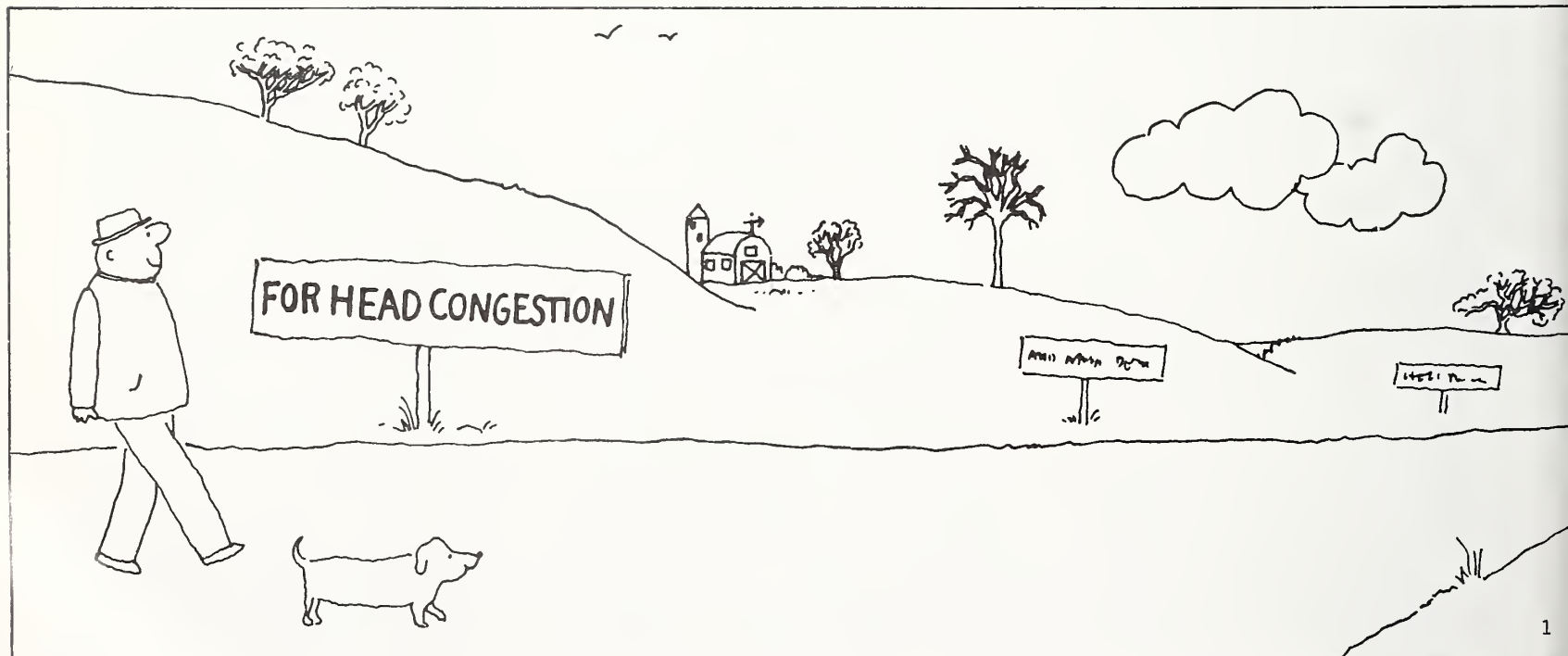
Wagoner, McIntosh)

Greer (Harmon) County

Jefferson County

Kay-Noble County

ADVERTISEMENT





Logan County  
 Northwestern (Beaver, Ellis, Har-  
 per, Woodward) County  
 Okfuskee County  
 Okmulgee County  
 Osage County  
 Pittsburg (Latimer) County  
 Pontotoc (Johnston) County  
 Pottawatomie County

2. The following county societies have *not* furnished the association with copies of their updated constitutions and bylaws as required by the OSMA House of Delegates in 1966:

Alfalfa-Woods County  
 Beckham (Roger Mills) County  
 Blaine County  
 Choctaw-Pushmataha County  
 Cookson Hills  
 Garvin County  
 McCurtain County  
 Oklahoma County  
 Rogers-Mayes County  
 Stephens County  
 Washington-Nowata County

It is recommended that the OSMA House of Delegates *assume* that the above mentioned counties have adopted the recommended model constitution and bylaws or have revised theirs to conform; and that each be rechartered on this assumption. It is further recommended that these county societies be informed in their rechartering letter that their rechartering is based on this assumption and that if a conflict arises and their constitution and bylaws are not compatible with those of the

state association, the conflict will be decided as if they were.

Report of the  
 MEDICAL SCHOOL LIAISON  
 COMMITTEE  
 (APPROVED)

*Committee Members*

C. Riley Strong, M.D., El Reno,  
 Chairman  
 James L. Dennis, M.D., Oklahoma  
 City  
 Robert S. Ellis, M.D., Oklahoma City  
 William P. Jolly, M.D., Lawton  
 Edward K. Norfleet, M.D., Tulsa  
 C. L. Tefertiller, M.D., Altus  
 Mrs. Richard E. Witt, Muskogee

During the past year the University of Oklahoma Medical School was given a great boost forward by the people of Oklahoma. The passage of State Question 463, the \$99 million bond issue passed December 10th, contained a provision for \$26,870,000 to help develop the heart area of the Oklahoma Health Center planned around the University of Oklahoma Medical School.

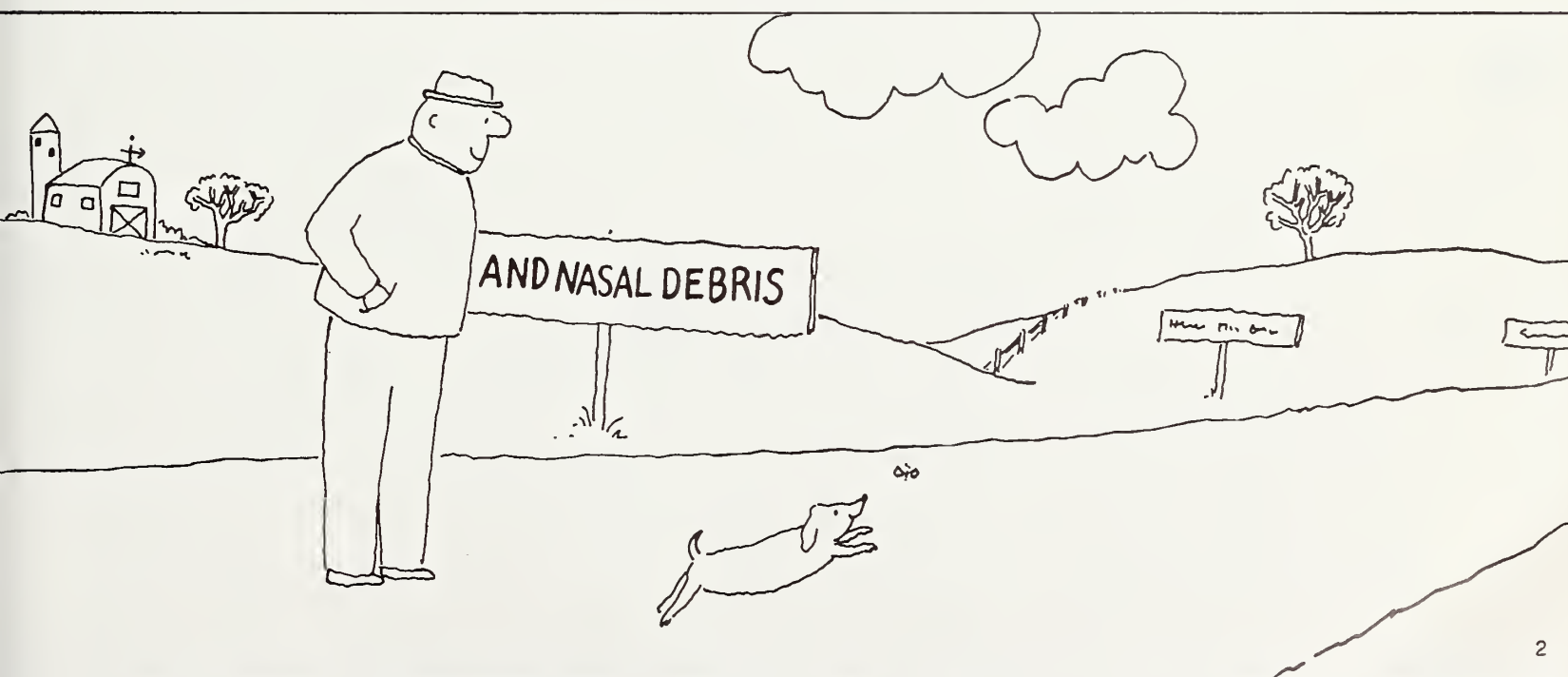
Your association actively participated in the campaign for passage of this question. An advertising fund goal of \$125,000 was established with the physicians' portion to be \$15,000. Physician response was overwhelming and we surpassed our quota to contribute \$15,215.00 to the fund.

In addition to this contribution, your association prepared a campaign promotion kit for distribution

to all county medical societies. A letter accompanied the kits and asked each society to do four things. These were: (1) adopt a resolution favoring passage of State Question 463 and furnish a copy of same to the local newspapers; (2) purchase advertising space for insertion of newspaper ads being prepared and distributed by the association office; (3) hold a county society meeting and invite community opinion leaders to attend and hear a program on the bond issue; and (4) hold a meeting of all health and allied personnel in the society area and urge them to "take ten" persons to the polls with them on December 10th. Almost all county medical societies responded vigorously to this request and implemented the campaign program.

The Oklahoma Health Center portion of the bond issue provides buildings to house a new school of dentistry, a new school of public health, a new school of health related professions, a graduate education center, and a second 200-bed wing of the University Hospital. In addition, it will pay for expansion and modernization of the University School of Nursing and provide \$4 million for acquisition of land for the proposed educational facilities.

Passage of this omnibus proposal allows Oklahoma to expand its medical school, train its own dentists, public health personnel, technicians,





and other paramedical personnel, increase the number of nurses and establish a graduate education center planned to provide graduate study and research facilities in the field of health and medicine.

State Question 463 provided a total of \$45 million worth of health manpower and health care facilities throughout Oklahoma. Federal matching fund grants will augment the bond issue total by an additional \$23 million. This means that a total of \$68 million will be spent in Oklahoma in the next few years on health and health manpower facilities.

#### STUDENT AMERICAN MEDICAL ASSOCIATION

Members of the Oklahoma Chapter of the Student American Medical Association have evidenced increased interest in the activities and programs of the OSMA. On many different occasions they have come to us for our advice and assistance on their various projects.

This interest is commendable and since these young people are the future members of our association, this interest should be cultivated. We should consider some mechanism for joint participation and interaction between the SAMA chapter and the association. Since there is no "official" liaison between the two organizations, your committee would

like to recommend that it be directed to establish such.

Such a liaison should concern itself with keeping medical students informed about the activities of the association and keeping the association informed about the desires, interests and wishes of the students. Through the Medical School Liaison Committee, your association could work with the SAMA chapter to plan joint activities.

Such a liaison could be implemented easily by the creation of an ex officio executive or subcommittee of the Medical School Liaison Committee.

#### Recommendations:

1. It is recommended that the Medical School Liaison Committee be continued on an indefinite basis and that it continue to inform itself of the current developments affecting the University of Oklahoma Medical School.

2. It is recommended that the committee be directed to form, from its own membership, an ex officio subcommittee to establish liaison between the association and the Oklahoma Chapter of the Student American Medical Association.

#### Supplemental Report of the MEDICAL SCHOOL LIAISON COMMITTEE

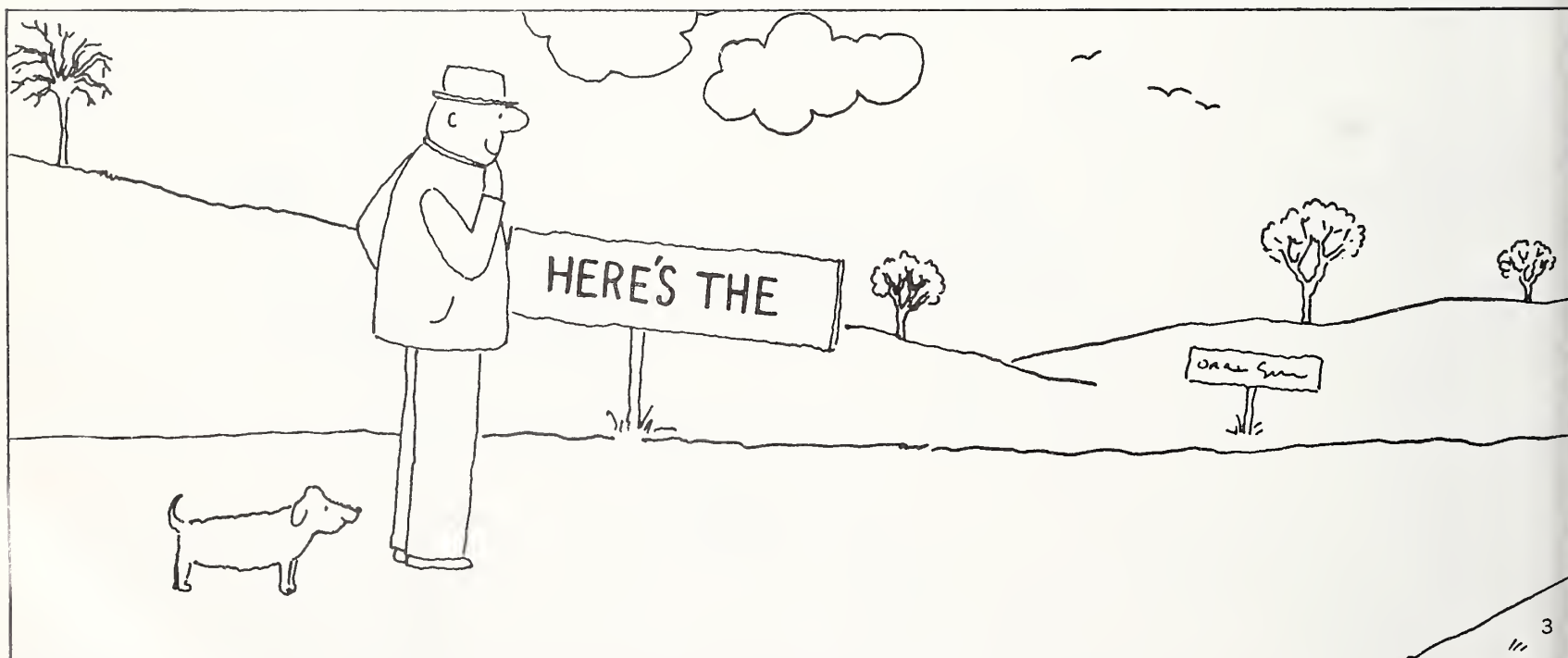
(C. Riley Strong, M.D., Chairman of the OSMA Medical School Liaison Committee, attended the National

SAMA Convention in Chicago, April 1-4, 1969, with the OU Medical School Chapter delegation. Upon his return, he filed the following report that is now offered to the OSMA House of Delegates for information purposes.)

The OSMA and the OAGP made a good investment in the future of medicine by contributing to the expenses of the Oklahoma Chapter of the Student American Medical Association for their National SAMA convention.

Thirty-two Oklahoma students made up the largest delegation to attend the convention. They were extremely well-organized, having taken with them a typewriter, Thermo-fax and duplicating machine in order that each member could be informed on all that was occurring at the meeting. Meetings were held each morning and evening so that everyone understood what was going on in all of the reference committee meetings.

The SAMA meeting is operated similar to the AMA and AAGP Houses of Delegates with the resolutions and reports referred to reference committees. Each member of the Oklahoma delegation volunteered or was assigned to attend certain reference committee hearings. Oklahoma had two members on two reference committees; they also had two members on standing committees.





Each member of the delegation was supplied with a survey of how the students at home felt about the different resolutions and they presented this information to the reference committees (no other delegation had this type information). Every reference committee was covered by one, two, or three members and they presented Oklahoma's stand on all of the issues. No other state could have members at all reference committee hearings at the same time.

In my opinion the general theme of the meeting was definitely very liberal. This is because of the past leadership of the SAMA organization. Because of the leadership of the Oklahoma delegation this liberal trend has been slowed down for the present time.

The convention keynote speaker was Senator Edmund Muskie of Maine. He emphasized that medical care is a right and not a privilege and that this right shall be implemented by government control, if not by the private practice of medicine through the physicians themselves.

Another featured speaker was Wilbur J. Cohen, former Secretary of Health, Education and Welfare. He emphasized National Compulsory Health Insurance, Group Panel Practice, and the fact that medical care is a right.

A very important speaker was

Senator Fred R. Harris of Oklahoma because he is the Chairman of the National Democratic Party. He made an excellent presentation, well received by the students, but very liberal in its aspects. The Oklahoma delegation had a coffee for Senator Harris following his appearance on the program and he was most generous in consulting with all who wished to speak with him.

There was a very vocal liberal element in the meeting. They were easily spotted as members of the Student Health Organization trying to infiltrate SAMA. Many wore buttons of the Medical Resistance Union which is opposed to the draft and the war in Viet Nam. They were in sharp contrast to the clean-cut, well-groomed, efficient Oklahoma delegation.

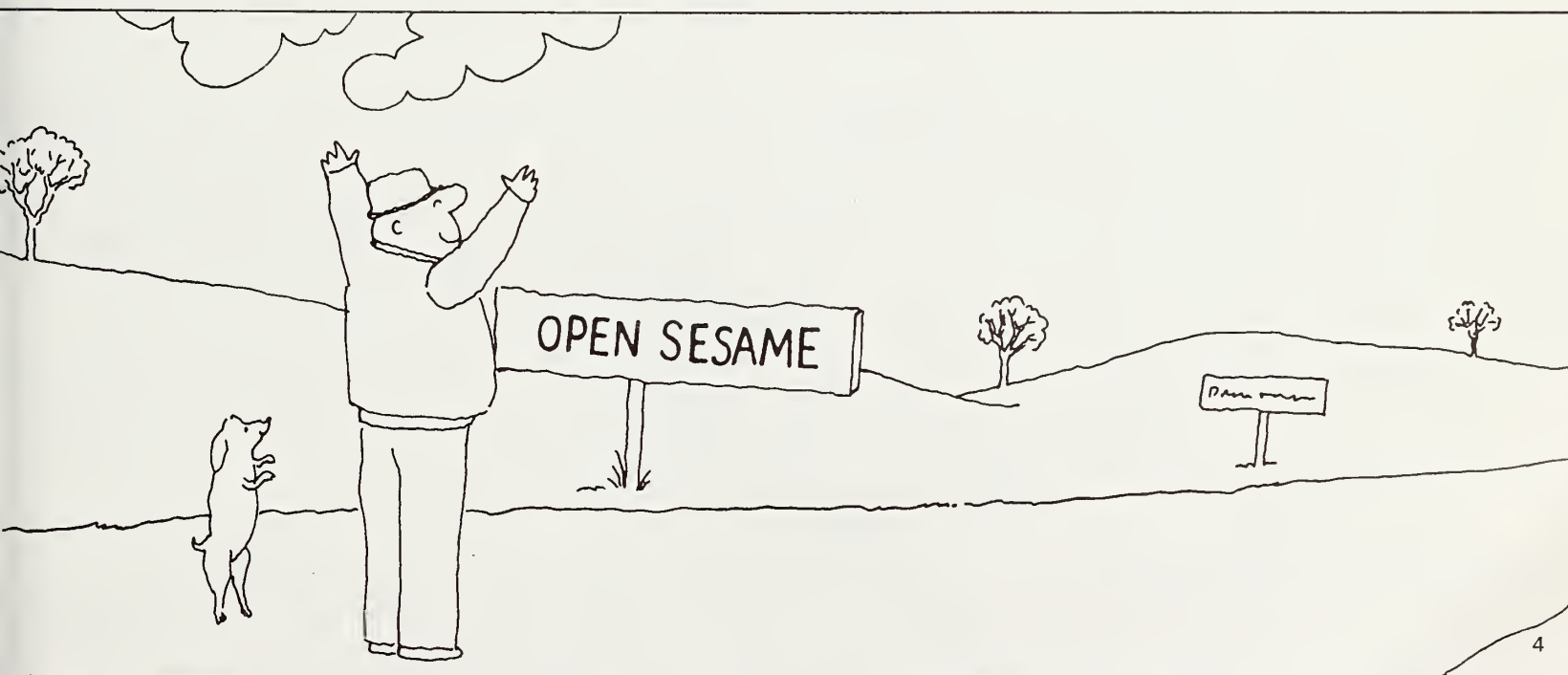
Part of the work-shop programs were sponsored by the SHO and the MCHR (Medical Committee for Human Rights) because of the liberal thinking of some of the National SAMA officers. These work-shops were so socialistic that many of the students from other states became more conservative. Some of the participants in the work-shops were not even related to the medical profession, such as the AFL-CIO representatives who also appeared at numerous reference committees.

Oklahoma's delegation should be commended for its fine effort at the

convention. The state was well represented by the official delegate, Joe Fagin, and alternate delegate, Douglas Smith. Sue Fankhouser, Secretary of the Oklahoma Chapter, is to be complimented for her efficient operation of the headquarters and for serving on the Constitution and By-laws Committee. Other Oklahomans in official capacities included: Jim Hassel, clerk of the House of Delegates; Rusty Andrews, member of the Credentials Committee; and Casey Truitt, member of the Nominating Committee.

Although Oklahoma did not win any national office, it did receive the award as the outstanding SAMA chapter of the year for this eleven state region. In addition, the recognition that the chapter received because of its organization and demonstrated ability at the convention should be a matter of pride for all Oklahoma physicians.

After attending this meeting and watching our young people work, it is my recommendation that the OSMA continue to increase its liaison and financial aid to the Oklahoma SAMA chapter. In addition, I would recommend that several physician-members of the OSMA attend the next National SAMA meeting to be held in Philadelphia in 1970. They should go as observers and advisors to the Oklahoma SAMA chapter. These young people are interested and willing to work for what they





think is right and, as the medical profession of the future, they deserve our support.

C. RILEY STRONG, M.D.  
Chairman, Medical School  
Liaison Committee

Report of the  
COUNCIL ON PROFESSIONAL  
EDUCATION  
(APPROVED)

*Council Members*

John W. Drake, M.D., Oklahoma  
City, Chairman  
Kelly M. West, M.D., Oklahoma City  
James V. Miller, M.D., Ardmore  
Forest D. Harris, M.D., Lawton  
Jack W. Parrish, M.D., Seminole  
Marvin K. Margo, M.D., Oklahoma  
City  
Ralph Buller, M.D., Hydro  
Jack D. Fetzer, M.D., Woodward  
Irwin H. Brown, M.D., Oklahoma  
City  
Glen L. Berkenbile, M.D., Muskogee  
Charles J. Roberts, M.D., Enid  
Donald L. Cooper, M.D., Stillwater  
Marcella Steel, M.D., Tulsa  
Lowell N. Templer, M.D., Altus  
Mrs. Marvin K. Margo, Oklahoma  
City

SECTION I

POSTGRADUATE EDUCATION

A. Regional Postgraduate Courses

The University of Oklahoma School of Medicine and the Oklahoma State Medical Association have for nine

years been partners in an educational effort for Oklahoma physicians. Your Council on Professional Education and the postgraduate office of the medical school have presented seven regional educational courses this organizational year. Eighty-nine physician-students attended the scientific lectures and current problem conferences. On three occasions the meetings were held in conjunction with auxiliary sessions and 24 physicians' wives attended.

Lectures were conducted by professors from the medical school and practicing physicians of the state.

Four current problem conferences were conducted as a part of the program and physicians were asked to bring charts, x-rays and details on cases they wished to present.

Scientific sessions were four hours and concluded with cocktails, dinner and an OSMA speaker.

Sites were chosen on the basis of geography and accessibility. The following cities were selected: Altus, Enid, Lawton, Shawnee, Stillwater, Texoma and Woodward. Physicians within a radius of approximately 50 miles were invited to attend. An average of 250 invitations were sent for each course. (Tulsa and Oklahoma Counties were excluded from the program because of the many courses available in these areas.)

A registration fee of \$10.00 was charged for each participant to defray the cost of speakers, travel ex-

pense and dinner. An accounting summary indicates that the program cost the OSMA \$517 over income.

B. Educational Television

Thirty-three courses covering virtually every field of medicine have been shown on the educational television channels, KETA and KOCO. As members of the Association of Medical Television Broadcasters, the medical school has been able to provide the best in medical films. The programs are shown on Tuesday mornings and the same film that evening.

These courses required 28 broadcast hours and would have cost in excess of \$14,000. However, because of the cooperation of the stations, we have been able to provide this service for only \$2,000.

It is difficult to assess the value of the television series, but it is felt that there is a good audience and the films are excellent.

*Recommendation:*

The continuing education of physicians has and continues to be a primary mission of the Oklahoma State Medical Association, and the Council on Professional Education has the responsibility of developing new and improved techniques of communication to keep the medical profession abreast of the dynamic changes in medical science. Continuing study should be given by the council toward innovations which will improve the quality of instruction



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and the quantity of participating physicians.

## SECTION II

### OKLAHOMA COUNCIL FOR HEALTH CAREERS

The Oklahoma State Medical Association has played a vital role in the activities of the Oklahoma Council for Health Careers. Three representatives of the medical profession serve on the Board of Directors of this organization; they are: Marcella Steel, M.D., Thomas C. Points, M.D. (President of the Board), and Mrs. Eleanor Johnson (Woman's Auxiliary).

OSMA and the Woman's Auxiliary to the OSMA were two of the founding organizations of the Health Career Council. This non-profit, tax exempt corporation is financially supported by 37 different organizations. In addition to the OSMA and the Woman's Auxiliary, there are 17 hospital auxiliaries that pay dues to the Council. The Oklahoma Regional Medical Program provides approximately 50 percent of the \$40,000 annual budget. Oklahoma Blue Cross and Blue Shield, Oklahoma Hospital Association, Oklahoma Heart Association, Oklahoma Public Health Association, Oklahoma State Association of Licensed Practical Nurses, the Oklahoma State Department of Vocational Technical Education, the Oklahoma State Medical Assistants Society, the Oklahoma Association

of Medical Record Librarians, the Oklahoma Chapter of the American Physical Therapy Association, Oklahoma Dietetic Association, Oklahoma League for Nursing, the Oklahoma Occupational Therapy Association, Oklahoma Podiatry Association, the Oklahoma Society of Medical Technologists, the Oklahoma State Nurses Association, the Medical Service Society, the Oklahoma City Area Hospital Council, the Tulsa Hospital Council, the Northwest Community Hospital in Mooreland, Oklahoma, all contribute toward the accomplishment of the Council's goals.

#### ACTIVITIES

##### A. Manpower Pool

In 1968, 150,000 motivational brochures were distributed to all high schools, colleges, universities, private schools, and hospitals in Oklahoma. The "Manpower Pool" is a reservoir of potential health career students who have requested specific health career information by using the self-addressed return post card contained in the motivational brochures. The Council has answered in excess of 15,000 requests for information.

##### B. Publications

Council publications include a Directory of Health Educational and Training Programs in Oklahoma, Guidelines for Conducting Local and Regional Health Career Rally Days, Directory of Scholarships, Grants and Loans, a monthly newsletter,

and numerous motivational and informational brochures.

##### C. Chartering of High School Health Science Clubs

The Council for Health Careers is now chartering high school health science clubs. These were formerly known as Future Nurses Clubs, Future Medic Clubs, etc.; presently, there are 14 clubs with 400 members. An organizational convention was held for the high school clubs Saturday, April 12th. Edward N. Brandt, M.D., Ph.D., Associate Dean, University of Oklahoma Medical Center, delivered the keynote address.

##### D. Publicity

Council representatives have been asked to appear on seven different television programs during the 20-month history of this organization for a total of 120 minutes of public service television time.

Last September the Council released four feature stories to 192 newspapers and distributed newspaper mats promoting nursing in the 30 largest newspapers.

Approximately 8,000 bumper stickers have been displayed.

Radio and television public service spot announcements have been distributed to all radio and TV stations.

The Council is now distributing a monthly newsletter to high school guidance counselors, health career clubs, administrators of educational

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and health facilities, and to health professional associations.

**E. Rally Days**

The Council has been involved in approximately 60 Health Career Rally Days and High School Career Day programs.

**F. New Programs**

The Council has encouraged, supported and assisted in the development of the following new programs:

**Nursing:**

*Baccalaureate*

University of Tulsa (9-1-69)

Central State College, Edmond (9-1-68)

*Associate Degree Program*

O.S.U. Technical Institute, Oklahoma City (9-1-69)

*Licensed Practical Nursing*

Vocational School, Enid (9-1-68)

**Medical Laboratory:**

Jane Phillips Hospital (ASCP) (9-1-68)

Sayre Jr. College (Laboratory Technician) (9-1-68)

Midwest City Hospital (1 yr. CLA) (9-1-68)

St. Gregory's Jr. College (9-1-69)

**Radiologic Technology:**

St. Francis Hospital, Tulsa (7-1-69)

**\*Medical Assistant:**

St. Gregory's University, Shawnee (9-1-69)

**Dental Hygiene:**

University of Oklahoma (HRP) (9-1-69)

St. Gregory's Jr. College (9-1-69)

**Medical Record Librarians:**

Southwestern State College (9-1-68)

University of Tulsa (9-1-69)

**\*Special Report Attached**

The number of nurses being admitted to the baccalaureate program has shown a 23 percent increase since 1967, number of students being admitted to the diploma program has increased 14 percent since 1967, and students being admitted to the associate degree nursing program has increased 13 percent. The increase in the LPN program is 18 percent.

**G. Health Career Coordinators**

Eighty health care institutions have appointed an individual to serve as health career coordinator. These

coordinators work with local 4-H Clubs, health science clubs, science classes, etc. in providing tours, assistance with programs, speakers, etc.

Probably the most encouraging aspect of the Oklahoma Council for Health Careers is the amount of support it has received both from the health professional associations and the "grass root" working professionals. The concerted effort by the medical and paramedical people in the state has proven to be a most effective way to promote the health professions and to recruit the high school and college students.

*Recommendation:*

While this is an informational report, it is recommended that the House of Delegates concur in and continue to support the Council on Health Careers.

**SECTION III**

**REGIONAL MEDICAL PROGRAM**

The Oklahoma Regional Medical Program is an undertaking of the citizens of Oklahoma designed to attack the major causes of death (cancer, stroke, heart disease and closely related diseases such as pulmonary emphysema, diabetes, and kidney disorders). It is financed through grants from the National Institutes of Health, but is planned and supervised locally under the administrative direction of Dale Groom, M.D.

The purposes of ORMP are:

1. To encourage and assist in the establishment of regional cooperative arrangements among medical schools, research institutions, and hospitals for research and training and for related demonstrations of patient care in the prescribed fields of disease.

2. To afford the medical profession and institutions the opportunity to utilize the latest advances in the diagnosis and treatment of these diseases.

3. By these means to improve generally the health manpower and facilities to accomplish these ends in cooperation with practicing physicians, medical center officials, hospital administrators, and representatives from appropriate health agencies.

The Federal act prohibits inter-

ference with the patterns of or the methods of financing, patient care or professional practice, or with the administration of hospitals.

Primary emphasis for the ORMP activities revolve around increasing the effectiveness and efficiency of medical care through voluntary collaborative arrangements, to improve prevention and treatment of the major diseases by bringing the latest medical advances as close to the community level as possible, and to improve local opportunities for continuing education.

Recently ORMP received a grant of \$1,258,378 from the Division of Regional Medical Programs, Department of Health, Education and Welfare. The grant is for a period of one year, beginning in May, 1969.

The University of Oklahoma Medical Center serves as a coordinating agency for this cooperative program involving private and public institutions and organizations in a joint effort to improve medical care in Oklahoma. Among the participants are the Oklahoma Heart Association, the Oklahoma Division of the American Cancer Society, the Oklahoma Tuberculosis and Respiratory Disease Association, the Oklahoma State Medical Association and more than 40 hospitals throughout the state. ORMP is one of 55 such programs in the United States which stem from health legislation passed by the 89th Congress in 1965.

In 1966, then Governor Henry Bellmon assigned responsibility for coordination of planning for the Oklahoma program to the O.U. Medical Center. However, policy and planning was to be supervised by an advisory group representative of the state's physicians, hospitals, nurses and other health professions, prominent citizens, educators and civic leaders. In addition, planning committees on heart disease, cancer, stroke, pulmonary disease, diabetes, kidney disease, continuing or postgraduate education and nursing were formed. In all, some 52 Oklahoma communities and over 450 individuals were involved in this intensive planning effort.

As a result of the planning efforts



of cooperating agencies and local advisory groups in Tulsa, Enid, Ada and other communities, nine proposed projects were designed, approved by the ORMP advisory group and submitted to the Division of Regional Medical Programs, Department of HEW. All of the projects were approved for funding.

The nine projects include cooperation between the faculty and staff of the O.U. Medical Center and, eventually, every hospital and health care institution or agency throughout the state. A primary emphasis is on continuing education programs for physicians, nurses and all other health professionals. The specific projects are:

—A coronary care project whereby larger hospitals with coronary care units will monitor coronary patients—via leased telephone lines—at one or more smaller hospitals. Intensive education programs for unit personnel will be designed to assure high quality care. During the three years funded for operation, it is hoped that over 45 hospitals will be included in this system, with more than 50 coronary care beds established in smaller hospitals which do not now have such facilities. Project coordinator is Loyal L. Conrad, M.D., cardiologist.

—A pulmonary emphysema project which will reach throughout the state to bring to more Oklahoma communities the latest knowledge and techniques for early diagnosis and treatment of this major disease. Project coordinator is Martin FitzPatrick, M.D., internist.

—An education and demonstration project to improve early diagnosis and treatment of cancer of the breast, using newer techniques such as mammography and thermography. Project coordinator is Eugene A. Durso, M.D., radiologist.

—A urology screening, education and demonstration project with special emphasis on the early diagnosis and treatment of cancer of the prostate. Approximately 250 Oklahoma men die annually of this killer. Most Oklahoma hospitals will be involved in this cooperative effort. Project coordinator is William L. Parry, M.D., urologist.

—A Tulsa cancer control project, involving the cooperative efforts of the major hospitals will be aimed at not only early diagnosis and detection of cancer of all types, but also will be a pilot project for automation of tumor data. The purpose of these modern methods of data gathering, storing, retrieving and disseminating tumor information is to improve patient care through a systematic and continuing evaluation of results. The information system also provides a basis for the continuing education of physicians and other health professionals concerning the newest methods of diagnosis and treatment. Project coordinator will be Joe L. Spann, M.D., surgeon. The Tulsa area ORMP coordinator is Robert G. Tompkins, M.D., internist; and Donald L. Brawner, M.D., surgeon, is chairman of the Tulsa area planning group.

—A pilot project for a continuing education program for the Enid area will demonstrate the value of a large hospital serving ten other hospitals as a center for continuing education of health professionals. St. Mary's Hospital in Enid will be linked, via leased telephone lines, directly to the cooperating hospitals in surrounding counties, and will provide a wide variety of consultative and educational services. Project coordinator is William R. Smith, M.D., who is a specialist in internal medicine.

—A library and information service project, based at the library of the University of Oklahoma Medical Center, will initially serve library centers in Tulsa and Enid. The project will provide health professionals the latest medical information and expedite the availability of documents, articles, digests, etc., to those in need of fast and reliable reference services. Project coordinator is Mrs. Patricia A. Smith, Master of Library Sciences.

—As a joint project of the Inter-agency Council on Smoking and Health, a statewide program will be conducted to emphasize the hazards of smoking and its relationship to heart disease, cancer, stroke and related diseases. The council is com-

posed of 19 members representing private and public agencies in fields such as heart disease, cancer, respiratory disease, and education. A project coordinator will be named in the near future.

—A nutrition project is designed to provide all health professionals with the latest information concerning the importance of nutrition in treatment of heart disease, cancer, stroke and related diseases such as diabetes and emphysema. Continuing education programs are already being conducted for dietitians, nutritionists, physicians and nurses from throughout the state. Such programs will be increased and expanded in scope. Project coordinator is Mary C. Zahasky, M.S., Chairman, Department of Dietetics, O.U. Medical Center. Mrs. Lucille Hall, M.S. and Mrs. Edna Langholz, M.S. will direct these activities.

#### *Recommendation:*

Although this report is for informational purposes, it is recommended that the OSMA maintain continuing liaison with the Oklahoma Regional Medical Program.

#### Special Report OKLAHOMA STATE MEDICAL ASSISTANTS SOCIETY

The Oklahoma State Medical Assistants Society has announced the creation of an Associate Arts Degree in Medical Assisting to begin this fall at St. Gregory's College, Shawnee, Oklahoma. The two-year course of study is designed to train individuals to serve as medical assistants to practicing physicians.

The associate degree program was an outgrowth of the medical assistants society's project to improve their own educational program. The medical assistants' education to date had consisted almost entirely of "on-the-job training" by the physician in his office.

Working with the University of Oklahoma Medical Center School of Health Related Professions, the assistants devised the minimal essentials for a two-year accredited junior college program curricula. During December of last year a special meeting of their House of Delegates approved the curricula for use at



St. Gregory's College in Shawnee. In addition, the Sayre Junior College, Connors State College, and Bacon College are considering starting identical programs in the near future.

The medical assistants have worked closely with the OSMA for several years. Two years ago the OSMA offered to undertake the secretarial and office duties of the medical assistants society. Since that time your association has published the medical assistants membership directory, minutes of their various meetings, handled correspondence for their officers and assisted them in planning their various programs.

This liaison between the two organizations has created a working relationship and a channel of communication far better than the association has with any other allied health manpower group.

The two-year junior college courses that will be offered at St. Gregory's and other colleges in the future consist of the following essentials:

*Anatomy and Physiology:* A course dealing with the various systems of the human body and elementary principles of human physiology.

*Medical Terminology:* The basic structure of medical words including prefixes, suffixes, roots and of combining forms and plurals; pronunciation, spelling and definition of medical terms; emphasis on building professional vocabulary required for working in the medical field.

*Medical Law, Ethics and Economics:* Legal relations of physician and patient, creation and termination of a contract, professional liability, malpractice, tort liability, and breach of contract; medical practice acts; professional attitude and behavior; fundamentals of meeting the special needs of patients. History of medicine—great men of medicine and their discoveries; types of medical practice, types of medical care, prepaid health insurance plans.

*Psychology:* A study of the purpose of modern psychology; individual differences, emotion and moti-

vation; frustration; mental health, sensation and perception.

*Medical Assistant Administrative Procedures:* Patient reception, appointment scheduling, proper telephone techniques, handling mail, medical records, business correspondence, insurance forms; medical dictation or machine transcription; office management practices; record keeping and financial records; practices given in entering daily transactions, using standard accounting records and preparing financial statements. (Typing is a prerequisite with minimum requirement of 40 words per minute.)

*Medical Assistant Clinical Procedures:* Examination room techniques, preparing the patient for examination, taking temperature, blood pressure, pulse and respiration; assisting the physician; care of the examining room, practices and techniques of sterilization procedures, understanding the meaning of sanitation, asepsis and sterilization; care of equipment and supplies, the acquisition, care and storage, application and disposition.

*Laboratory Orientation: Basic knowledge* of the purpose of the most frequent laboratory procedures: urinalysis, hematology, bacteriology, immunology, injections, x-rays, physical therapy, electrocardiology, basal metabolism.

*Externship:* Review and practical experience in offices of physicians.

It is obvious from the continuing education programs and the Associate Arts Degree project that the Oklahoma State Medical Assistants Society is striving to help the medical profession by offering it trained and competent medical assistants. This effort should not go unnoticed or unrewarded by the OSMA.

#### *Recommendations:*

1. It is recommended that the OSMA House of Delegates publicly recognize the fine educational effort being made by the Oklahoma State Medical Assistants Society and that it instruct the OSMA Executive Staff to continue liaison work with this organization.

2. It is further recommended that the House of Delegates invite all

OSMA member-physicians to urge their medical assistants to join this worthwhile organization.

### Report of the ANNUAL MEETING COMMITTEE (APPROVED)

#### *Committee Members*

Lucien M. Pascucci, M.D., Tulsa, Chairman

William L. Parry, M.D., Oklahoma City

P. D. Casper, M.D., Oklahoma City

Robert D. Shuttee, M.D., Enid

Wm. M. Benzing, Jr., M.D., Tulsa

Arthur F. Elliott, M.D., Oklahoma City

Albert Shirkey, M.D., Tulsa

E. M. Amen, M.D., Bartlesville

Richard B. Price, M.D., Oklahoma City

The efforts of the Annual Meeting Committee of your association are evidenced by the program and surroundings of this OSMA 63rd annual convention.

The committee would especially like to thank the program chairman of each specialty group represented on the program; the quality of the scientific programs of this meeting is the result of the efforts of these chairmen.

The 1969 annual meeting is organized on a slightly different format than past meetings. While each specialty group will have its sectional meeting, Friday afternoon has been reserved for a joint meeting of all groups. It is hoped the special session will be attractive to all participants of the convention. Your committee has tried to select a subject relevant to all medical groups and the speakers are indeed outstanding.

You will certainly observe some physical changes. The technical exhibits have been moved to the roomy atmosphere of the assembly hall foyer, and the auxiliary has produced a hobby show of enviable proportions. The registration is moved outside the exhibit hall in an effort to avoid confusion and the refreshment area is centrally located to provide the physician more opportunity to visit with commercial exhibitors.

Your committee devised an exhibit



floor plan that provided for 78 commercial booths, considerably more than sold at previous meetings. While all of these booths have not been sold at this time, a sufficient number have been sold to indicate that this meeting will be self-supporting and may return a modest profit to the association.

The committee chairman would like to take this opportunity to thank the members of this committee and others who worked so diligently in planning and producing the 1969 OSMA annual meeting.

*Recommendation:*

It is recommended that the 1970 OSMA annual meeting be held in Oklahoma City on May 14th through 17th.

Report of the  
COMMITTEE ON PLANNING  
(APPROVED)

*Committee Members*

- Maxwell A. Johnson, M.D., Tulsa,  
Chairman  
Scott Hendren, M.D., Oklahoma City  
C. M. Hodgson, M.D., Kingfisher  
C. E. Woodard, M.D., Tulsa  
Orange M. Welborn, M.D., Ada  
Rex E. Kenyon, M.D., Oklahoma City  
Mrs. Alfred T. Baker, Durant  
H. E. Denyer, M.D., Bartlesville  
Samuel R. Turner, M.D., Tulsa  
John W. Drake, M.D., Oklahoma City  
Hayden H. Donahue, M.D., Norman  
B. C. Chatham, M.D., Chickasha

SECTION I  
BUILDING EXPANSION

At the 1968 annual meeting, the House of Delegates, based on a recommendation from the Committee on Planning, authorized the Board of Trustees to carry out a program to add needed office space to the existing headquarters building.

It was estimated roughly at that time that such a project would cost \$57,000, to be financed by a withdrawal of \$17,000 from savings and a 15-year loan of \$40,000. Lease income from the Oklahoma County Medical Society at the rate of \$4,200 annually would virtually retire the loan according to the original estimates. In addition to the \$17,000 down payment, it was also recommended that \$10,000 from savings be set aside for furnishing the new

facilities and, of course, architect fees were also to be taken from savings.

During the period which elapsed between the annual meeting action and the initial stages of its implementation, severe increases in building materials occurred. In October, the architects, Nusbaum and Thomas, revised their estimate to the extent that the total cost would be about \$60,000. Also the Committee on Planning asked the architects to tentatively plan on adding a basement area pending the approval of the House of Delegates.

The House of Delegates met on November 17th. At that time, the architects estimated that it would cost \$12,000 to \$15,000 to add a basement of approximately 1,000 square feet. Not only would the basement provide fireproof storage for important records of the association, but it would also provide the potential for additional office space in the future. Moreover, if a basement was to be considered, it would obviously have to be included in the total construction plans since it could not be added later.

After considering several options for financing the basement addition, the House of Delegates elected to finance its cost totally from savings; and the House also authorized the acquisition of voluntary contributions from the membership to offset the drain on association surplus funds.

The addition of the basement brought the total expected outlay to \$80,000 (including architects' fee, but excluding furnishings).

Seven reputable general contractors bid on the project. Bids were opened on February 11th and the low bidder, J. W. Skaggs, quoted \$101,327. Here again, the extreme rise in construction costs accounted for the error in the architects' estimate.

The Committee on Planning authorized Mr. Blair and Mr. Bickham of the OSMA staff to institute direct negotiations with the builder in an effort to bring the commitment closer to the original budget. A meeting of the Committee on Planning was called for March 9th in ad-

vance of the Board of Trustees meeting set for the same date.

By excluding the basement and through other economies, OSMA staff was able to receive a revised construction cost of \$83,238.

The Committee on Planning recommended to the Board of Trustees on March 9th that the basement be put back into the plan, and this would place the total cost at \$93,238. Further, the committee recommended that association reserves should not be depleted below \$20,000. These recommendations were approved by the Board of Trustees.

OSMA staff obtained a loan from the Local Federal Savings and Loan Association, Oklahoma City, for \$50,000 at 7¼ percent for 15 years. Debt retirement on the loan will be \$5,477 annually or a difference of \$1,277 over the \$4,200 lease income from Oklahoma County Medical Society.

The total cost and the mechanism for financing are itemized below:

*Costs:*

Building (including basement)	\$93,328
AIA Fee (based on \$80,000)	6,000
Loan Cost	625
Carpet	3,600
	<hr/>
	\$103,553

*Funds:*

Savings	\$38,553
Contributions*	15,000
Loan	50,000
	<hr/>
	\$103,553

\*At the present time, \$14,190 has been voluntarily contributed to the building fund by state physicians.

OSMA savings amount to \$62,847.38. Thus, a withdrawal of \$38,553 would leave a balance of \$24,294.38 which would be in keeping with the House of Delegates direction to retain at least \$20,000 in surplus.

We have been advised by the Woman's Auxiliary that \$2,000 has been budgeted to assist financially with the building program. In addition, substantially more voluntary contributions can be expected if more promotion is done (contributions are tax-deductible).

The Committee on Planning also



recommended to the Board of Trustees that consideration be given to a dues increase of \$10 to \$25 per year. This matter was referred to the Appropriations and Auditing Committee, and the results of their deliberations will be reported separately.

## SECTION II MANAGEMENT STUDY

The Committee on Planning had hoped to complete this year a management study of the operations of your association. Our plans were to ask association executives from other states to evaluate the association activities and to make recommendations to the planning committee. In order to do a thorough study, the committee felt that the evaluation team should be on the premises for ten days to two weeks to work with our OSMA staff. Unfortunately, the events of the year were such that there seemed to be no opportune time. The building expansion program, the staff's increased workload and the fact that we had a new associate director were factors which contributed to the committee's decision to delay the study. The committee still plans to conduct the study and will select an opportune time to do so next year.

## SECTION III MICROFILMING

Your committee has worked on plans to offer to OSMA members the opportunity to microfilm and store old medical records at OSMA headquarters.

A major obstacle in the plan was a lack of space. Since we are adding a basement to our building we have solved the space requirement.

We are studying two possibilities: one is to purchase the equipment and do the microfilming with our own personnel, and the other is to contract with a competent firm to do the initial work. OSMA would then store the film and recall the records upon request. Feasibility studies on neither program are complete at this time. Initial studies are

not very encouraging; however, the committee will complete the studies and report at a later date.

## SECTION IV RECOMMENDATIONS

1. Continue to solicit voluntary contributions to the OSMA Building Expansion Program to offset the expenditure of OSMA surplus.
2. Conduct a management study of OSMA activities with an evaluation team of outside authorities.
3. Complete the feasibility study of a microfilming program.

## Report of the APPROPRIATIONS AND AUDIT COMMITTEE (APPROVED AS AMENDED)

*Committee Members*  
C. Riley Strong, M.D., El Reno,  
Chairman  
Ed Calhoon, M.D., Beaver  
Marvin K. Margo, M.D., Oklahoma  
City

## SECTION I AUDIT REPORT

Under the terms of the OSMA by-laws, the Appropriations and Audit Committee has the responsibility of conducting an annual audit of the accounts of the association. However, since the fiscal year does not end until May 31st, and since the annual meeting of the House of Delegates is normally held in early or mid-May, it is not possible for an audit to be carried out by the committee in advance of the annual meeting.

The committee met, however, on April 27th with the OSMA Secretary-Treasurer, Executive Director, and bookkeeper, and reviewed a budget comparison report regarding the first 10½ months of our fiscal operations. This report is felt to accurately reflect our financial condition at the present time (it will be presented in detail in the report of the Secretary-Treasurer). In relation to the budget suggested by the Secretary-Treasurer, our committee recommended that an additional \$1,500 be added to operating expenses because of our increasing need to bolster the Oklahoma University Chapter of the Student AMA.

At the end of the fiscal year, the Appropriations and Audit Committee will have an audit carried out by our certified public accountant and this audit will be presented to the Board of Trustees and will be subsequently mailed to all members of the House of Delegates.

To permit the committee to have an official audit completed prior to the annual meeting each year, the thought was considered to have the fiscal year end on March 31st. However, on reflection, it was felt that this step would create more problems than it would cure. In the first place, OSMA dues become delinquent on March 31st, and there are enough outstanding dues at that time to distort any audit which might be conducted. Secondly, the present fiscal year coincides generally with the beginning and end of annual organizational activities, thereby relating fiscal affairs to organizational management and making budgetary considerations more meaningful.

## SECTION II DUES INCREASE

On recommendation of the Committee on Planning, the Board of Trustees asked the Appropriations and Audit Committee to study and report to the House of Delegates. The proposition was to raise the OSMA dues, effective January 1st, 1970, from \$10.00 to \$25.00 annually.

A survey was taken of the 50 state medical associations, plus those in the District of Columbia and Puerto. Average 1969 dues for these associations are \$85.19, as compared to the OSMA's \$75.00 (\$5.00 of which is earmarked for scholarships and loans). Moreover, our survey revealed that 14 state associations had definite plans to increase their dues in 1970 and two others had the problem under study. When the projected increases of the 14 states are considered, the national average of dues in 1970 will amount to \$90.43 per association. For 26 states of intermediate size (comparable to Oklahoma) their current average is \$82.38 and their projected average for 1970 is \$88.44.

State association dues range from a low of \$35.00 a year to \$200. Some of those with exceedingly low dues



are known to have additional income of a substantial nature (federal grants, publications of national circulation, etc.). Others are known to be less active than the OSMA.

Your committee also considered the history of OSMA dues increases in the light of expanding activities and inflation. OSMA dues were \$12.00 in 1936, \$22.00 in 1947, \$42.00 in 1948, \$47.00 in 1962 (the \$5.00 increase was earmarked for scholarships and loans) and \$57.00 from 1964 to 1967. Meanwhile, the problems and myriad projects of organized medicine continued to mount. In 1967, OSMA dues were raised to \$75.00 for the expressed purpose of keeping pace with growing responsibilities by employing one additional Association Executive Secretary, one additional secretary, and one stenographer-file clerk (only two were employed).

The activities of organized medicine are increasing, but the value of the dollar declines. To maintain a good staff—and perhaps add to it as conditions require—more funds will have to be invested in the fulltime talent it takes to keep abreast of the dynamic era in which we live and practice.

Cost-of-living increases are well-known to physicians, averaging about five percent a year generally, and much more in certain lines of endeavor. Our projected budget for the next fiscal year reveals an expected deficit. It is unwise for an intelligent and relatively affluent group of professionals to permit their organization to remain static during such a critical period of history.

#### *Recommendation:*

Your committee believes that the Oklahoma State Medical Association is among the stronger state associations of its size, and yet its spendable dues structure is approximately \$20.00 a year under the national average. The necessary expansion of our headquarters building, necessary salary increases and growing operating costs, and losses incurred by the State Journal are reasons for our recommendation for the passage of a dues increase.

*Therefore, your Appropriations and Audit Committee unanimously recommends that annual OSMA dues*

*be increased to \$100.00 effective January 1, 1970.*

#### Report of the BOARD OF TRUSTEES (APPROVED) BOARD ACTIONS

Four meetings of the Board of Trustees have been held since the last annual meeting. This report covers the significant actions of the first three meetings, and actions taken at the May 15th annual meeting of the Board are covered in the accompanying supplemental report.

Reportable actions taken during the first three meetings are summarized below:

1. The annual audit report for the fiscal year ending May 31st, 1968, was approved by the Board on recommendation of the Committee on Appropriations and Auditing. Copies were prepared and mailed to all members of the House of Delegates.

2. A report from the Secretary-Treasurer was approved, containing the following recommendations:

- a. Deposit current operational funds to savings accounts in order to gain daily interest.

- b. Transfer from savings accounts to checking accounts, as needed, in order to write checks to meet current operational expenses. A range of \$3,000 to \$5,000 was to be maintained in checking accounts.

- c. Phase payments of AMA dues in order to gain interest for the benefit of the OSMA. (This policy was later rescinded by the Board, to the extent of remitting to the AMA more promptly).

- d. Pool certificates of deposit and monies in savings and loan accounts into one bank in order to receive the maximum 6¼% earnings on deposits of over \$100,000.

- e. Provide for tourist class air travel, except where there are extenuating circumstances.

- f. Provide for itemization of miscellaneous expense account items on travel vouchers.

- g. Provide that entertainment expenses must be authorized by the President and single expenditures of over \$25.00 must be accompanied by a receipt.

3. The Board adopted the follow-

ing policy statement:

"In general, the Board of Trustees does not feel that association funds should be spent for entertaining each other. Exceptions to this policy are left to the discretion of the President and the Executive Director."

4. A revised budget, based upon actions taken by the House of Delegates at the 1968 annual meeting, was approved by the Board. This budget predicted an operational surplus of \$800 for the year.

5. A program to provide employment for medical students during the summer months of 1969 was approved.

6. Doctor Ben H. Nicholson was appointed as Editor-in-Chief of the OSMA Journal following the death of C. B. Dawson, M.D. Subsequently, Doctor Nicholson expired, and was replaced by Mark R. Johnson, M.D., Oklahoma City.

To fill the term of Walter E. Brown, M.D., who resigned as a member of the Editorial Board, the Trustees appointed Robert G. Tompkins, M.D., Tulsa.

7. H. E. Denyer, M.D., OSMA President-Elect, resigned as a Trustee from District I. He was replaced by Glenn W. Cosby, M.D., Miami. Subsequently, Doctor Cosby resigned and was replaced by Jess D. Green, M.D., Bartlesville, and the Board named Edward W. Allensworth, M.D., Vinita, as Doctor Green's Alternate Trustee. Henry D. Wolfe, M.D., Hugo, resigned as Trustee from District XI. He was replaced by Alfred T. Baker, M.D., Durant, and the Board appointed Floyd L. Waters, M.D., Hugo, as Alternate Trustee.

8. Pursuant to the House of Delegates directive to expand the OSMA headquarters building, the Board of Trustees authorized the Committee on Planning to develop detailed plans for subsequent approval of the Board. Acceptable plans were developed by Nusbaum and Thomas, Architects, and the addition of a basement facility was approved by the House of Delegates on November 17, 1968 (to be financed from association reserves and from voluntary contributions). However, when bids from seven general contractors were



opened, the low bid was \$101,327. Negotiations between the architects and the low bidder resulted in reducing the cost to \$83,328, but this included abandonment of the basement. At a meeting of the Board on March 9th, it was decided to reinstate the basement at a cost of \$10,000 and to discontinue immediate plans for furnishing the new quarters by an offsetting \$10,000. Thus, the contract was awarded at \$93,553. A loan at 7¼ percent was obtained, and the combination of at least \$15,000 in voluntary contributions (and withdrawals from savings) will permit compliance with the budget. OSMA savings, by directive of the House of Delegates, will not be reduced below \$20,000. Mortgage payments of \$5,477 annually will be offset by lease income from the Oklahoma County Medical Society of \$4,200 per year.

More information on the building project is contained in the report of the Committee on Planning.

9. The Board approved a position paper on major issues, prepared by the President and Executive Director, to be furnished to political candidates.

10. The Board sponsored the traditional banquet for members of the University of Oklahoma Chapter of the Student American Medical Association, and also authorized travel expenses to assist SAMA in sending a large delegation to their national meeting in an effort to have our politically-conservative chapter well-represented in national policy-making.

11. Trustees received periodic reports from association councils and committees regarding their activities.

12. Thomas C. Points, M.D., Marcella Steel, M.D., and Mrs. Port Johnson (auxiliary) were appointed to serve as the OSMA representatives on the Oklahoma Council for Health Careers. Mrs. Arthur Springall (auxiliary) who moved out of state, was commended by the Board for her leadership in establishing the Council.

13. Hardship petitions for the pur-

pose of waiving OSMA dues for a one-year period, were approved for seven physicians.

14. A Fifty-Year Club membership was awarded to Wann Langston, M.D., Oklahoma City.

15. The Board authorized the President to submit six names to the Department of Public Welfare from which two appointments would be made to the Advisory Committee on Medical Care for Public Assistance Recipients. Appointed were Robert Sukman, M.D., Oklahoma City, and Riley A. Hill, M.D., Oklahoma City.

16. The Board agreed to continue its sustaining membership in the Oklahoma Jaycees in the amount of \$100 per year.

17. Periodic reports from the Secretary-Treasurer were presented throughout the year regarding association finances.

18. The Board approved the nominations of the President-Elect regarding the composition of the Executive Committee for the 1969-70 organizational year. He nominated the president, president-elect, vice-president, immediate past-president, chairman of the Board of Trustees, speaker and vice-speaker of the House of Delegates, and the three delegates to the AMA.

19. To fill one vacancy on the State Health Department's Nursing Home Advisory Council, the Board nominated James F. Tagge, M.D., Enid, and Roy O. Kelly, Jr., M.D., Shawnee.

20. To fill one vacancy on the State Health Department's Hospital Advisory Council, the Board nominated W. C. McCurdy, M.D., Purcell, and W. K. Haynie, M.D., Durant.

21. The Board approved a report from the Oklahoma Health Economic Council which called for discontinuing the employment of a special staff in the interest of utilizing the limited available resources for the production of more health economic educational material.

22. The Board received as information the idea of forming a non-profit foundation for the purpose of attracting non-medical funds to pursue projects of interest to the profession and the public welfare.

23. At the recommendation of the Committee on Planning, the Board authorized the Committee on Appropriations and Auditing to study and make recommendations regarding the need and propriety of increasing OSMA dues by \$15 to \$25 annually.

24. A resolution honoring Doctor Harry Wilkins was authorized by the Board.

25. Subscription rates to the OSMA Journal, for non-members were increased to \$6.50 per year.

26. Approval was granted to purchase a full-page ad in the Sooner Medic, the medical school's yearbook, at a cost of \$125. Also, the Board authorized a sustaining membership in the Student American Medical Association at \$100 per year.

27. The Board heard a report from the Medical Insurance Review Committee requesting the creation of a new standing committee whose purpose would be to counsel with physicians having personal, professional, mental or physical problems of a significant nature. This matter was referred to the Executive Committee for study and recommendation.

28. Membership of the association at this writing is reported as follows:

Active Members	1,842
Active Dues-Exempt Members	57
Applications Pending	44
Life Members	135
Affiliate Members	8
Junior Members	17
<hr/>	
Total	2,103

#### Recommendations:

It is recommended that applications for Life Memberships be approved for the following physicians:

- Roger Q. Atchley, M.D., Tulsa
- E. E. Beechwood, M.D., Bartlesville
- Harold C. Bradley, M.D., Oklahoma City
- James C. Brogden, M.D., Tulsa
- E. Rankin Denny, M.D., Tulsa
- Hugh C. Graham, Sr., M.D., Tulsa
- Clark H. Hall, M.D., Oklahoma City
- L. A. S. Johnston, M.D., Holdenville
- Ralph A. McGill, M.D., Tulsa



George H. Miller, M.D., Tulsa  
Roy L. Neel, M.D., Oklahoma City  
Frank J. Nelson, M.D., Tulsa  
Marque O. Nelson, M.D., Tulsa  
James C. Peden, M.D., Tulsa  
Joel S. Price, M.D., Oklahoma City  
Killis C. Reese, M.D., Tulsa  
W. A. Showman, M.D., Tulsa  
Mary Edna Sippel, M.D., Tulsa  
Clarence S. Summers, M.D., Tulsa  
Henry H. Turner, M.D., Oklahoma City  
David J. Underwood, M.D., Tulsa  
Fred E. Woodson, M.D., Tulsa

BOARD OF TRUSTEES  
SUPPLEMENTAL REPORT  
(APPROVED AS AMENDED)

In addition to the Board of Trustees' report which summarizes actions of the preceding organizational year, the following items resulted from the Annual Meeting of the Board conducted on May 15th, 1969, in the Tulsa Assembly Center.

1. Doctor C. Riley Strong, El Reno, was elected to a one year term as Chairman of the Board of Trustees, replacing Doctor Samuel R. Turner, Tulsa, who had served three consecutive terms and was restricted by the bylaws from re-election. Also, Doctor Marvin K. Margo, Oklahoma City, was elected to a one year term as Vice Chairman of the Board.

2. Three resolutions were received late (the bylaws require the Board's approval of any resolution that is not received 30 days prior to the House of Delegates meeting). Resolution No. 5 was accepted by the Board for submission to the House of Delegates; Resolution 6 was accepted by the Board for presentation to the House of Delegates, but the Board of Trustees unanimously moved to oppose the adoption of this resolution; Resolution No. 7 was accepted by the Board for presentation to the House of Delegates.

3. On nomination by the Board of Directors of the Oklahoma Medical Political Action Committee, the Board of Trustees appointed the following Directors of OMPAC for the 1969-70 organizational year:

*Congressional District No. 1:*  
Stephen J. Adelson, Tulsa

Hugh Perry, Jr., Tulsa  
Mrs. Sam Turner, Tulsa  
W. Dean Hidy, Tulsa  
*Congressional District No. 2:*  
Elvin M. Amen, Bartlesville  
Tom S. Gafford, Jr., Muskogee  
Norman A. Cotner, Grove  
Jess Green, Bartlesville  
*Congressional District No. 3:*  
Frank W. Clark, Ardmore  
Mrs. J. F. York, Madill  
E. H. Shuller, McAlester  
Orange M. Welborn, Ada  
*Congressional District No. 4:*  
James W. McDoniel, Chickasha  
William C. McCurdy, Jr., Purcell  
Charles L. Tefertiller, Altus  
Paul N. Vann, Lawton  
*Congressional District No. 5:*  
Rex Kenyon, Oklahoma City  
Johnny A. Blue, Oklahoma City  
Donald R. Resler, Oklahoma City  
Neil W. Woodward, Oklahoma City  
*Congressional District No. 6:*  
Ed L. Calhoon, Beaver  
Jack D. Fetzer, Woodward  
Avery B. Wight, Enid  
Thomas G. Glasscock, Ponca City

*Womans Auxiliary:*  
Mrs. J. R. Stacy, Oklahoma City  
Mrs. Harlan Thomas, Tulsa  
Mrs. C. B. Dawson, Oklahoma City

4. The Board of Trustees reviewed and discussed in detail the report of the Appropriations and Audit Committee, and adopted a motion to support a dues increase of \$25 annually for the OSMA. Further, since the Board is aware that the general membership of the OSMA may not receive a \$25 dues increase with enthusiasm, it is recommended by the Board that an intensive campaign be carried out to make all state physicians aware of the need of a dues increase of this magnitude.

5. With respect to the reports of the Medical Insurance Review Committee, the Governmental Relations Committee, and Resolution No. 5, the Board recommends that the comments made regarding the payments for physicians' services under the Medicaid program should be more strongly worded to reflect the association's determination that physicians be paid on the basis of usual, customary and reasonable fees.

6. The Board appointed Robert G. Tompkins, M.D., Tulsa, to a three

year term on the Editorial Board.

7. The Board approved a report of the Executive Committee which recommends the following amendments to the Bylaws:

"1. Amend Chapter X, Section 1.00 of the bylaws by striking the words 'and the' in the next to the last line of the section, by replacing the period of the end of the section with a comma, and by adding the phrase 'and the Physicians Committee' at the end of the section.

"2. Amend Chapter X of the bylaws by re-designating the existing Section 9.00 to Section 10.00 and by inserting new Sections 9.00 and 9.01, as follows:

"9.00 PHYSICIANS COMMITTEE. The committee shall be comprised of at least six members appointed for staggered terms of three years each by the president and approved by the Board of Trustees.

"9.01. DUTIES. The committee should make itself available to counsel with physician-members who are having personal, professional, mental or physical problems of a significant nature. Such counseling shall be unofficial and shall not be considered disciplinary. Physican-members of the association may request such counseling, or the committee, at the recommendation of another association committee, council, physician-member, or component society, may offer to counsel with a physician-member. Counseling sessions are to be considered privileged and no written record or minutes will be taken."

8. With regard to the 1971 annual meeting, the Board received a report from the Executive Director of the Tulsa County Medical Society in which he pointed out a serious conflict of dates involving the International Oil Exposition. There are several possibilities and alternatives to satisfactorily schedule the 1971 annual meeting in either Oklahoma City or Tulsa. However, the matter needs further investigation and the Board of Trustees requests the authority of the House of Delegates to make suitable arrangements following a more thorough investigation.

9. The United States Chamber of Commerce has circulated to its mem-



bers a ballot in which the Chamber wishes to change its present position of opposition to the Medicare program. In lieu of being totally opposed to the concept of financing health care through Social Security taxation, the Chamber wishes to adopt a more liberal attitude ostensibly to improve its lobbying position regarding favorable amendments to the Medicare program. The OSMA is entitled to ten votes on this particular issue, and the Board of Trustees voted to cast all ten votes for the United States Chamber of Commerce to maintain its current position of opposition to Medicare on the theory that opposition to this concept does not disenfranchise any organization from testifying before Congress on any issue.

10. On recommendation of the county medical society involved, the Board waived state association dues for seven physicians.

11. As reported in the preceding report of the Board's activities throughout the year, a committee of the Board actively engaged in finding summer employment for O.U. Medical students in cooperation with the local chapter of the Student American Medical Association. A report on this unique program (only one other medical society in the country has a similar program) was received at this annual meeting and discussed at length. A representative of SAMA appeared before the Board and expressed appreciation for the work being done. Improvements need to be made in the methodology of placing medical students, and the Board feels confident that the already successful program can be perfected during the ensuing years.

12. The Board received a report from the outgoing President of OSMA, Doctor Scott Hendren, concerning recent developments involving the Medicaid program. The Department of Health, Education and Welfare has appointed an ad hoc committee to "study" the methodology for paying physicians' fees, and the committee is comprised of

persons who are felt to be advocates of a fixed fee schedule which will be presumably much less than currently being paid by our Department of Public Welfare. At the present time, Doctor Hendren reported, the OSMA House of Delegates' policy is to require that governmentally financed health care programs must be paid physicians on the basis of usual, customary and reasonable fees.

Doctor Hendren expects that some deleterious action will be forthcoming in the very near future, and he suggested to the Board of Trustees that consideration would have to be given to a special called meeting of the House of Delegates as a reaction to the impending action of the Department of Health, Education and Welfare.

Report of the  
SECRETARY-TREASURER  
(APPROVED)  
SECTION I

*Financial Statement*

The Secretary-Treasurer, among other duties, shall render an annual account of all receipts, expenditures, funds invested and on hand to the Board of Trustees and House of Delegates.

An official audit will be carried out by the Appropriations and Audit Committee at the close of the fiscal year, and this will be duly presented to both OSMA policy-making bodies. Meanwhile, to give the House of Delegates a picture of the financial status of the association at this annual meeting, the Secretary-Treasurer ordered the books closed as of April 15th, and herewith presents a "Budget Comparison Report" covering 10½ months of our operations. This particular report technique serves as a tool throughout the year to check actual expenditures and income with the budgeted items approved by the House of Delegates at the previous annual meeting. Thus, the left-hand column of figures show actual amounts as of April 15th, the center column shows the amounts budgeted for the period, and the right-hand column shows the variance from the budget.

An analysis of this report indicates the following:

1. Operational expenses (excluding Journal operation) are \$6,256 below income at this time. It may also be seen that the actual income and expense figures closely parallel the budget, particularly in their general totals.

2. Journal operational expenses, on the other hand, show a loss of \$2,655 for the period. While the Membership Directory more than paid for itself, and although Journal operating expenses are actually less than the budget, an appraisal of the problem reveals that a significant decline in Journal advertising revenue is responsible for the overall loss in this phase of our operations. The advertising loss occurs at the national level (our national advertising accounts are sold through a sales agency called the State Medical Journal Advertising Bureau). The problem is not unique to our Journal since medical advertising, primarily regarding pharmaceutical products, is off generally to the extent that the existence of journals published by medical associations is being threatened. Our Executive Director has met with the staff of SMJAB in Chicago and offered several possible solutions to the national dilemma; these suggestions are now under consideration.

SMJAB officials cite the following reasons for the decline: (a) State publications, because of their relatively small circulations, have a high-cost per reader, and the ad agencies employed by drug manufacturers are more and more inclined to recommend commercial media with large circulations; (b) Again, because of limited circulation, the cost of color advertisements is disproportionately high for state journals; (c) There has been a dearth of new products released in recent years due to the general harassment of the drug manufacturers by the Federal government.

To illustrate the extent of the decline, here are some round figures on total advertising sales for the past few years: (a) 1969—\$29,000; (b) 1968—\$35,000; (c) 1967—\$41,000.



BUDGET COMPARISON REPORT  
June 1, 1968—April 15, 1969

MEMBERSHIP

<i>Income</i>	<i>Actual</i>	<i>Budget</i>	<i>Variance</i>
Membership Dues . . . . .	\$109,640	\$110,250	\$ (610)
Miscellaneous Income			
(AMA Commissions) . . . . .	1,096	1,102	( 6 )
Interest from Savings . . . . .	4,705	3,062	1,643
Scholarship and Loan Fund (from dues)	7,830	7,874	( 44 )
Postgraduate Courses . . . . .	920	1,137	(217)
OSMA Newsletter . . . . .	1,500	1,575	( 75 )
Laboratory Survey . . . . .	313	—	313
American Medical Association Grant .	2,500	—	2,500
Medicine & Religion Conference . .	358	—	358
Total Membership Income . . .	\$128,862	\$125,000	\$ 3,862
<i>Expenses</i>			
Fixed Expenses* . . . . .	\$ 79,654	\$ 79,625	\$ 29
Depreciation . . . . .	1,890	1,890	—
Councils and Committees			
Public Policy . . . . .	5,192	5,250	( 58 )
Insurance . . . . .	—	438	(438)
Professional Education . . . . .	3,908	3,500	408
Socio-Economic . . . . .	—	1,314	(1,314)
Public Health . . . . .	1,667	1,314	353
Professional & Intervocational . .	396	875	(479)
	\$ 92,707	\$ 94,206	(\$1,499)
Scholarship and Loan Fund . . . .	\$ 7,830	\$ 7,874	\$ ( 44 )
In State Travel . . . . .	3,244	3,500	(256)
Out of State Travel . . . . .	12,970	11,376	1,594
Okla. Health Economic Council . . .	2,155	5,250	(3,095)
Oklahoma Health Careers** . . . .	3,700	3,675	25
Total Membership Expense . . .	\$122,606	\$125,881	(\$3,275)

\*\$1,000 for President's Travel Expense for fiscal year.  
\$1,000 contribution to the Dwight F. Whelan Memorial Trust.  
\$2,780 for Student American Medical Association Banquet.  
\*\*\$ 600 in dues held over from previous fiscal year.  
NOTE: OSMA Surplus funds are presently \$62,847.38.

JOURNAL

<i>Income</i>	<i>Actual</i>	<i>Budget</i>	<i>Variance</i>
Journal Advertising, Sales & Subs. .	\$ 27,351	\$ 32,374	\$(5,023)
Subscription from dues . . . . .	3,063	3,063	—
	30,414	35,437	(5,023)
Membership Directory			
Advertising and Sales . . . . .	3,624	3,149	475
Total Journal Income . . . . .	\$ 34,038	\$ 38,586	\$(4,548)
<i>Expenses</i>			
Journal Printing, Salaries, Etc. . .	\$ 34,483	\$ 34,999	(516)
Membership Directory Printing . . .	2,210	2,013	197
Total Journal Expense . . . . .	\$ 36,693	\$ 37,012	\$ (319)
TOTAL INCOME . . . . .	\$162,900	\$163,586	\$ (686)
TOTAL EXPENSE . . . . .	\$159,299	\$162,893	\$ 3,594
	3,601	693	2,908
PROFIT . . . \$3,601			
Annual Meeting Income . . . . .	\$ 10,485	\$ 16,625	6,140
Annual Meeting Expense . . . . .	866	16,625	(15,759)
	\$ 9,619	—	\$ 9,619

NOTE: Contributions to Building Fund \$13,625.

The Secretary-Treasurer knows that the Editorial Board is concerned about the advertising problem and will work toward its solution. However, since the problem is basically of national status, the budget for next year will show a cautious estimate of advertising revenue.

Meanwhile, all members of the association could help by regularly discussing the advertising problem with pharmaceutical representatives who call on them.

3. When the points covered in the first two items above are combined, the OSMA financial outlook for the first 10½ months of the fiscal year indicates a surplus of \$3,601.

4. By revolving association operating funds and surplus funds in certificates of deposit, and by the use of a transfer arrangement between our checking account and a savings account, we have been able to add about \$1,000 in interest income above our total earnings for the previous fiscal year.

5. Operational expenses for the next 1½ months following the foregoing Budget Comparison Report cannot be predicted with accuracy, but it would appear that total income and expenses for the complete fiscal year will be in balance, with a small surplus possible.

6. One major item in our operational affairs will have a great bearing on "profit or loss" for the fiscal year, and that is the annual meeting. Oklahoma probably runs the largest annual meeting of any state association of comparable size, and the income and expense statement on this project will materially affect our overall financial balance for the year. Here again, it is virtually impossible to predict the outcome in advance, since there are so many variables. We do know, however, that the Annual Meeting Committee and the staffs of the OSMA and the Tulsa County Medical Society have done everything possible to provide the most for the money and without a deficit.

SECTION II  
Annual Meeting

Below is an estimate of income and expense for the 1969 annual meeting. Several assumptions have



1969 ANNUAL MEETING  
Estimated Income and Expense

## INCOME

Booth Rental . . . . .	\$ 14,425
Contributions . . . . .	3,100
Ticket Sales . . . . .	4,750

Total Income . . . . .	\$ 22,275
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## EXPENSE

Guest Speakers . . . . .	\$ 3,300
Luncheons . . . . .	2,250
Dinner-Dance . . . . .	3,400
Gaslight Party . . . . .	1,700
Oyster Crack . . . . .	750
Past-President's Breakfast . . . . .	75
Facility Rental . . . . .	955
Signs . . . . .	280
Badges and Ribbons . . . . .	51
Printing . . . . .	1,800
Awards . . . . .	150
Decorations . . . . .	2,400
Staff Expense . . . . .	1,200
Security . . . . .	235
Insurance (Hobby and City of Tulsa) . . . . .	182
Projection Equipment and Service . . . . .	800
Sound System . . . . .	125
Miscellaneous . . . . .	1,000

Total Expense . . . . .	\$ 20,653
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Estimated Surplus . . . . .	\$ 1,622
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been made from the standpoint of income; (a) The estimate of booth rental speculates that three or four exhibits can be sold between the time this report was prepared and the commencement of the meeting; (b) Ticket sales assume a minimum attendance of 250 at the Inaugural Banquet and 300 at the Gaslight Party.

As to expenses, there is always margin for error in the estimates provided.

The budget deserves several comments:

1. Total income expectations remain generally unchanged, with the following exceptions: (a) A conservative estimate of Journal advertising revenue has been made; (b) Interest income will decline due to expending a portion of surplus funds for the building expansion program; (c) Building lease income has been added, based on \$350/mo. for eight months during the next fiscal year from the Oklahoma County Medical Society.

2. As to expense estimates, the

following comments are made: (a) Last year's budget of \$91,500 for "fixed expenses" has been increased to \$95,500. This added amount is to accommodate additional insurance costs for the expanded building, increased costs for janitorial service, increased utility costs, and other factors involving the generalized increase in the costs of goods and services. In addition, on recommendation of the Appropriations and Auditing Committee, an additional \$1,500 was budgeted for the benefit of the Student AMA. (b) In an effort to bring the budget closer in balance, commitments to councils and committees were reduced somewhat (generally in keeping with actual expenditures this year). (c) Mortgage payments on the building loan have been included as a new item (for the eight-month period expected to be necessary during the next fiscal year).

3. The net result of income and expense expectations indicates a deficit of \$2,750 for the next fiscal year.

## SECTION IV

## Recommendation:

1. It is recommended that the budget for the 1969-70 fiscal year be approved by the House of Delegates (subject to adjustments as may be required by actions taken by the House of Delegates at this meeting and subject to the Delegates' action regarding an increase in dues as recommended by the Planning Committee and the Appropriations and Audit Committee).

Report of the  
COUNCIL ON PROFESSIONAL AND  
INTERVOCATIONAL RELATIONS  
(APPROVED AS AMENDED)

## Council Members

Orange M. Welborn, M.D., Ada,  
Chairman

Jerold D. Kethley, M.D., Shawnee

E. H. Shuller, M.D., McAlester

R. Barton Carl, M.D., Oklahoma City

Jack D. Spencer, M.D., Oklahoma  
City

C. William Simcoe, M.D., Tulsa

John R. Taylor, M.D., Kingfisher

Richard D. Stansberry, M.D., Okla-  
homa City

James Silman, M.D., Norman

Burdge F. Green, M.D., Stilwell

J. L. Haddock, M.D., Norman

Joe L. Duer, M.D., Woodward

Frank Clark, M.D., Ardmore

E. D. Padberg, M.D., Ada

Edward K. Norfleet, M.D., Tulsa

Mrs. James B. Silman, Norman

*Committee on Cults and Quackery*

James B. Silman, M.D., Norman,  
Chairman

Kelly M. West, M.D., Oklahoma City

M. Joe Crosthwait, M.D., Midwest  
City

John E. Highland, M.D., Miami

William R. Turnbow, M.D., Tulsa

Irwin H. Brown, M.D., Oklahoma  
City

William N. Harsha, M.D., Oklahoma  
City

Floyd T. Hubbard, M.D., Okmulgee

Robert L. Shore, M.D., Lawton

*Medical-Legal Relations Committee*

R. Barton Carl, M.D., Oklahoma  
City, Chairman

Walter E. Brown, M.D., Tulsa

Edgar W. Young, M.D., El Reno

J. T. Hicks, M.D., Lawton

Marvin K. Margo, M.D., Oklahoma  
City



SECTION III  
1969-70 Budget

The following is presented as the OSMA budget for the fiscal year beginning June 1st, 1969 and ending May 31st, 1970:

INCOME

Membership Dues . . . . .	\$126,000
Scholarship & Loan Fund (from dues) . . . . .	9,000
Journal Advertising, Subscriptions (from dues). . . . .	33,000
Membership Directory Sales & Advertising . . . . .	3,600
Annual Meeting . . . . .	22,000
Interest Income . . . . .	3,000
Miscellaneous Income (AMA Commissions) . . . . .	1,260
Postgraduate Courses . . . . .	1,300
OSMA Newsletter Advertising . . . . .	1,800
Building Lease Income . . . . .	2,800
<b>Total Income . . . . .</b>	<b>\$203,760</b>

EXPENSE

Fixed Expenses . . . . .	\$ 95,500
Depreciation . . . . .	2,160
Councils and Committees	
Public Policy . . . . .	\$5,500
Insurance . . . . .	100
Professional Education . . . . .	3,200
Socio-Economic Activities . . . . .	1,000
Public Health . . . . .	1,000
Professional & Intervocational Relations . . . . .	500
<b>Scholarship &amp; Loan Fund . . . . .</b>	<b>9,000</b>
In State Travel . . . . .	4,000
Out State Travel . . . . .	13,000
Journal Expense . . . . .	40,000
Annual Meeting . . . . .	22,000
Oklahoma Health Careers . . . . .	3,600
Directory Printing . . . . .	2,300
Mortgage Payments . . . . .	3,650
<b>Total Expense . . . . .</b>	<b>\$206,510</b>
<b>Deficit . . . . .</b>	<b>\$ 2,750</b>

James P. Bell, M.D., Oklahoma City  
 Royce C. McDougal, M.D., Holden-ville  
 Donald P. Ferrell, M.D., Norman  
 L. V. Baker, Jr., M.D., Elk City  
 Dave B. Lhevine, M.D., Tulsa  
 Avery B. Wight, M.D., Enid  
 Mrs. W. J. Buvinger, Enid  
*Committee on Medicine and Religion*  
 Edward K. Norfleet, M.D., Tulsa,  
 Chairman  
 E. C. Mohler, M.D., Ponca City  
 Adolph N. Vammen, M.D., Tulsa  
 E. N. Lubin, M.D., Tulsa  
 Martin H. Andrews, M.D., Oklahoma  
 City  
 Charles E. Green, M.D., Lawton  
 Mrs. E. Cotter Murray, Oklahoma  
 City  
*Committee on Nursing*  
 Joe L. Duer, M.D., Woodward, Chair-  
 man  
 John P. Colmore, M.D., Oklahoma

City  
 C. S. Lewis, M.D., Tulsa  
 John L. Hackney, M.D., Edmond  
 William R. Cheatwood, M.D., Duncan  
 Mrs. Port Johnson, Muskogee  
*Committee on Osteopathy*  
 Frank W. Clark, M.D., Ardmore,  
 Chairman  
 Irwin H. Brown, M.D., Oklahoma  
 City  
 Kelly M. West, M.D., Oklahoma City  
 E. E. Shirecliff, M.D., Oklahoma City  
 John A. Blaschke, M.D., Oklahoma  
 City  
 Beryl D. Henwood, M.D., Collinsville  
 Mrs. R. A. Clay, Oklahoma City  
*Committee on Pharmacy*  
 E. D. Padberg, M.D., Ada, Chairman  
 William B. Renfrow, M.D., Oklahoma  
 City  
 H. L. Ratliff, M.D., Pawnee  
 E. N. Lubin, M.D., Tulsa  
 Mrs. James P. Bell, Oklahoma City

SECTION I  
THE COUNCIL

During the past year your Council on Professional and Intervocational Relations has continued to broaden its liaison activities with other health and paramedical organizations. These functions were carried out, primarily, through the council's subordinate committees. These committees are: The Committee on Osteopathy, the Medical-Legal Relations Committee, Committee on Medicine and Religion, Committee on Nursing, Committee on Pharmacy, and the Committee on Cults and Quackery. The council feels specific committees in each of these areas are required to continue to develop a constant exchange of information and ideas. These committees also give the association an agency by which minor problem areas between and among medical groups and other professional organizations can be prevented from becoming major problems.

Certain fields of activity are of direct concern to the council as a whole rather than a separate committee. Such a field of interest has been in relation to the profession of podiatry. In the 1967-68 association year, your Council on Professional and Intervocational Relations, at the direction of the OSMA House of Delegates, worked out a "Position of Podiatry" policy statement. This statement was adopted by the delegates during the 1968 Annual Meeting in Oklahoma City.

Following the adoption of the Policy Statement on Podiatry, there was some reaction by certain podiatrists and a liaison committee of podiatrists requested a joint meeting to discuss certain other objections to our policy. A meeting was held in the OSMA Office Building in July, 1968. The main point of objection, on the part of the podiatrists, was to that section of our policy statement, stating that "in those hospitals where a podiatrist is permitted to perform surgery as a technician, it is recommended that he be under the direct supervision of a physician. By supervision, it is meant that during the operation, a staff surgeon must be present in the operating room,



gowned and scrubbed, as the responsible person."

The podiatrists on the liaison committee were under the impression that we had adopted only the limitations outlined by the Joint Commission on Accreditation of Hospitals. In this regard we have received correspondence from John D. Porterfield, M.D., Director of the Joint Commission, stating that the Joint Commission had changed its policy and that the portion of the Joint Commission statement that we had quoted was no longer current policy.

During the joint meeting the council clarified its position to the podiatrists and a letter was sent to Doctor Porterfield explaining the policy statement.

The letter explained the council's stand to the Joint Commission, pointing out that the licensing laws for podiatry in Oklahoma are extremely liberal and we stated, in part, "In view of the lack of statutory limitation and any review by a medical board, or any control by a Medical Board of Examiners, or even a joint board as is set up in most states of the Union, we felt that a somewhat positive stand was necessary by the Oklahoma State Medical Association in drawing a line as to what surgical procedures shall be carried out in hospitals where the medical staff is made up of medical doctors and osteopathic physicians where this medical staff is charged with the quality of medicine and surgery practiced in that hospital . . .

"We are not advocating any unfair limitation on valid and well-qualified medical or surgical practices by any group, but we do feel an obligation to our patients to insist on proper supervision and proper curtailment of surgical privileges within the hospital where we as members of the medical staff are charged with the responsibility of the quality of medical and professional care."

#### Recommendations:

In view of the above mentioned exchange of information it is recommended that the House of Delegates direct the Council on Professional and Intervocational Relations to con-

tinue its study of the position on podiatry and to make recommendations for changes as such become appropriate. It is further recommended that the House of Delegates reaffirm its policy on podiatry as adopted in 1968 at the annual meeting.

## SECTION II COMMITTEE ON CULTS AND QUACKERY

During the past year the Committee on Cults and Quackery has continued to compile a vast document file on the practice of chiropractic in this state and nation. Recently we have received two significant additions to this file: a feature story in *Senior Citizens News* and a copy of the report from the Department of Health, Education and Welfare on *Independent Practitioners Under Medicare*.

In the January, 1969, issue of *Senior Citizens News* there appeared a two-page feature article entitled "Why Chiropractic Cult Cannot Provide Quality Health Care!" This was one of the strongest indictments against chiropractic that was ever carried in a national publication.

*Senior Citizens News* is published by the National Council of Senior Citizens, Inc., and is distributed nationwide. On several different occasions the council has come out publicly opposing the inclusion of chiropractors under Medicare.

The second important addition was a report to the United States Congress issued by the Department of Health, Education and Welfare and entitled "Independent Practitioners Under Medicare." The report was commissioned by Congress and outgoing Secretary of HEW, Wilbur J. Cohen, in a letter to John W. McCormack, Speaker of the U.S. House of Representatives, stated that it was his recommendation that no changes be made in Medicare coverage in relation to the services of chiropractors and naturopaths. In closing his letter he said, "I should call particular attention to the recommendation concerning chiropractic and naturopathy. This is of particular significance and of a character different from the other recommendations since the central issue is the

ability of these two practitioner-groups as a result of their education and basic approach to give quality care."

The report has been reproduced in quantity and your association has several on file in its Oklahoma City office. These will be used on appropriate occasions when the need arises.

Also during the past year your committee has approached the President-elect of the association and requested he rename a majority of the 1968-1969 committee to serve during the '69-70 association year. The committee was of the opinion that the various aspects of cults and quackery are so involved and complicated as to make it virtually impossible for an individual to serve only one year on the committee and even grasp the extent of the problem.

To further familiarize Oklahoma physicians with the problems of cults and quackery, your committee is planning to ask the OSMA Committee on Postgraduate Education to consider the possibility of the quackery committee being allowed to give short presentations at some of the regional postgraduate courses. These presentations would be used to keep physicians in various parts of the state advised of the latest quack methods and cultist propaganda.

Another approach being studied by the committee is that of working with the Oklahoma University Law School on the possibility of holding a medical symposium for law students. The purpose of the symposium would be to acquaint law students with the procedures they should use to deal with physicians when they enter legal practice. It would also give the committee an opportunity to familiarize these young men with the philosophies behind the various healing arts groups.

A discussion was held on the possibility of the OSMA encouraging its members to serve as team physicians for highschool athletic departments. It was called to the committee's attention that some physicians who volunteer to serve in such positions are criticized for doing so. In response to this, your committee has gone on record as



actively encouraging such participation by association members.

One of the activities of your committee is going on during this annual meeting. Two spaces in the exhibit area contain an exhibit on cults and quackery.

*Recommendations:*

1. It is recommended that the activities of the Committee on Cults and Quackery be continued on an indefinite basis and that liaison with other interested health groups for a program of education for the press, the legislature and the Oklahoma public be sought.

2. It is further recommended that the committee and the Council on Professional and Intervocational Relations study the advisability and possibility of seeking appropriate legislation for the correction of the many abuses in the areas of cults and quackery in Oklahoma.

3. Your committee wishes to recommend that the OSMA House of Delegates adopt a policy of encouraging association members to volunteer to participate as team physicians for school athletic programs.

SECTION III  
MEDICAL-LEGAL RELATIONS  
COMMITTEE

On July 11th-13th, 1968, the OSMA Medical-Legal Relations Committee in cooperation with the Oklahoma Bar Association's committee held a "Medical-Legal Institute" at Fountainhead State Lodge. Over 100 physicians and attorneys participated in the three-day program.

The purpose of the institute was to promote a closer "personal" relationship between the medical and the legal professions; serve as a study in malpractice prevention for physicians and to aid attorneys in advising their physician-clients; and, finally, to give both professions an opportunity to enter into a meaningful dialogue on the problem areas existing between them.

Since this institute was a joint effort, it was decided by the committee that neither association should be required to underwrite its cost. There was a \$25 per person registration fee charged and income from this was sufficient to pay all institute expenses. A profit of \$727.53 is be-

ing kept in a special account at Founders National Bank to help underwrite another joint institute.

Because of the magnitude of work involved in presenting the medical-legal institutes, the joint committee has voted to plan them on a biennial basis. This would mean that the next institute would be held sometime in 1970. Such biennial scheduling allows interim efforts to be directed toward improvement of medical-legal relations and other aims of the joint committee.

The most important objective, of course, is the implementation of the "Medical-Legal Interprofessional Code." Interaction between attorneys and physicians is becoming more common each day and as new problems arise it will be necessary to update the code.

*Recommendations:*

Realizing the importance of continued liaison with the Oklahoma Bar Association in studying the mutual problems of the medical and legal professions, it is recommended that the Committee on Medical-Legal Relations be continued on an indefinite basis and that it continue to seek the further implementation and modernization of the "Medical-Legal Interprofessional Code."

SECTION IV  
COMMITTEE ON MEDICINE AND  
RELIGION

On December 5th, 1968, your committee, in cooperation with the Oklahoma Council of Churches, sponsored a "Conference for Clergy and Physicians" in the Camelot Inn, Tulsa, Oklahoma. The conference took for its theme, "Marriage: Medicine and Religion."

Over 100 physicians and clergymen attended the meeting to hear Reverend L. Mack Powell, special lecturer in marriage and family courses, Family Development Department, School of Home Economics, University of Oklahoma, and John L. Hoff, Th.D., Assistant Professor of Pastoral Psychology and Counseling, Graduate Seminary, Phillips University, Enid. These men, with James L. Dennis, M.D., Vice-President of the University of Oklahoma Medical Center, and Edward K. Norfleet, M.D., Chairman

of the OSMA Committee on Medicine and Religion, discussed such topics as "Sex and Self," "The Church and the Sexual Revolution—A Prudish Physician's Appraisal," "Self Worth: Currency for the Business of Living."

The comments from physicians and clergymen made during and following the meeting dramatically pointed out the renewed interest in the field of medicine and religion and the need of the two professions to continue a close liaison.

*Recommendations:*

1. In view of the continued and growing interest in the field of medicine and religion, it is recommended that the Committee on Medicine and Religion be continued on an indefinite basis and that it be instructed to study additional methods of implementing cooperation and exchange of information between medicine and the clergy.

2. If the committee is to continue high quality conferences for clergymen and physicians, it is further recommended that the Council study the feasibility of increasing the committee budget. Such an increase would be helpful in order to attract top quality speakers.

SECTION V  
COMMITTEE ON NURSING

Your committee has continued its liaison with the Oklahoma Nurses Association throughout the past year. The most obvious benefit can be seen in the "Doctor of the Day" and "Nurse of the Day" program being conducted at the State Capitol Building during the legislative session.

Under the auspices of the OSNA, a registered nurse volunteers each day to work with the physician assigned to the legislative First Aid Station.

During the past year your committee met with its counterpart from the nurses association to discuss the possibility of holding another nurse-physician conference, similar to the one held in February, 1968. Both groups agreed that such a conference would be helpful, but felt that it would be necessary to receive outside financial support since it was a large economic undertaking.

Unfortunately, your committee was unsuccessful in finding such outside



support and the conference could not be held. However, discussions on this topic will continue with the nurses organization with the view of holding such a conference in the future.

*Recommendations:*

It is recommended that the Committee on Nursing be continued on an indefinite basis and that it continue its liaison activities with the nursing profession.

**SECTION VI**

**COMMITTEE ON OSTEOPATHY**

**A. Introduction:**

At the 1968 annual meeting, the House of Delegates made the following recommendations concerning osteopathy: (1) The OSMA committee was asked to review and revise the 1966 guidelines for implementation of the osteopathic recognition program; (2) The Delegates "did not object" to the O.U. medical school permitting osteopaths to attend certain postgraduate education courses on an experimental basis; and, (3) The OSMA committee was directed to study the feasibility of creating a combined licensure board for the healing arts.

This report will deal with these matters and others:

**B. Osteopathic Recognition Program:**

In 1965, the House of Delegates took note of a change in AMA policy toward osteopaths. The AMA had decreed, "It shall not be considered in itself unethical for members of the AMA to associate professionally and on a voluntary basis with doctors of osteopathy who base their practice on the same scientific and ethical principles as doctors of medicine; and it is the prerogative and obligation of each constituent medical association to implement this policy on a state and local basis."

Responding to this change in attitude, the OSMA House of Delegates established a method whereby certain osteopaths who were practicing scientific medicine could be recognized through the county medical societies, and medical doctors could then ethically associate with such recognized osteopaths on a professional basis.

Criteria for making the selection

of worthy osteopaths, and suggested application forms, were circulated to the county medical societies on repeated occasions. The program was met with overwhelming indifference by both medical societies and osteopaths. Only 14 osteopaths from six counties have been recognized to date.

It is obvious that this program has not worked, and your committee feels that it cannot be successfully implemented in the future. Meanwhile, many medical doctors—particularly those who are forced to work in close proximity to osteopaths, or certain specialists whose consultations are sought by osteopaths—are involved in tenuous ethical situations.

Each individual medical doctor may make his own evaluation of the individual osteopaths with whom he comes in contact under those conditions set forth in Recommendation No. 2, page 14, of this report. The primary concern must be the welfare of the patient.

Despite your committee's feeling that a more liberal approach to osteopaths should be taken in the interest of patient care, we remain strongly opposed to fraternization with osteopaths who are professional or ethical irregulars.

Neither are we prepared to accept at this time the report approved by the American Medical Association last December, which may be summarized as follows:

1. AMA offered to assist osteopathic schools to raise their standards to the medical school level.

2. It was suggested: (a) that accredited medical hospitals may accept qualified osteopaths for medical staff appointments; (b) that upon approval of the medical specialty boards, AMA sponsored residency programs may be opened to qualified osteopaths; (c) that AMA approved internship programs may be opened to qualified osteopaths; (d) that state and county medical societies may accept qualified osteopaths as active members and thereby provide for their membership in the AMA.

As might be expected, the new AMA policy was vociferously rejected by both the American Osteopathic Association and the Oklahoma Osteo-

pathic Association. (See OOA Resolution.)

The AMA plan—which appears to be effectively blocked at the present time—is to bring about the eventual amalgamation of the two professions and to convert the remaining schools of osteopathy to medical schools.

Since osteopaths number more than 400 in Oklahoma—far more than our share of the national total of some 13,000—the OSMA should look forward to a possible amalgamation and a discontinuation of further osteopathic licensure. Moreover, an evolution in osteopathy may be taking place which merits our attention since schools of osteopathy may be tending to emulate medical education.

However, the militant attitude of osteopathic organizations toward achieving common standards of professionalism will undoubtedly delay any efforts along this line. In your committee's judgment, evidence of interest will have to be received from the rank-and-file members of the osteopathic profession before any formal overtures are made by organized medicine.

**C. Postgraduate Education:**

The experimental program to permit osteopaths to attend certain courses at the medical school appears to be working satisfactorily; the D.O.'s are apparently appreciative of the opportunity to receive high-quality instruction, and their interest has been evidenced by relatively high enrollment in the courses offered to them.

**D. Licensure:**

It appears that a key step toward developing uniform standards of professional competency might be the creation of a study committee for developing an equitable criteria for licensure for osteopathic physicians for the simple reason that the tests must be the same for medical doctors and osteopaths if the term "physician and surgeon" is to be meaningful to the public.

Osteopaths are recognized by Oklahoma law as equals to medical doctors, and their associations even go so far as to make poorly-supported statements as to their educational



superiority. The osteopaths, therefore, should have no fear in taking the same examinations as medical doctors.

*E. Liaison:*

There has been some progress during the last few years in the area of liaison between the two professions. For example, a joint group worked harmoniously in trying to resolve a hospital staff problem involving an osteopath, and there has been some liaison regarding state legislation of mutual interest. In other areas—such as governmental relations involving payment for medical services—OSMA has furnished the OOA with information, but no joint meetings have been held even though the osteopaths have requested them.

Since osteopaths provide about 20 percent of the patient care in Oklahoma, and there are a number of areas of legitimate mutual interest, it appears as if additional liaison efforts should be made.

*F. Recommendations:*

1. It is recommended that the current policy should permit (but not mandate) individual medical doctors to ethically associate on a limited professional basis with certain osteopaths who, in the judgment of the OSMA member, practice according to scientific principles and are ethically acceptable. A medical doctor may receive referrals from such osteopaths, provided he remains solely responsible and in complete control of therapy, and provided that the patient should not be returned to the referring osteopath for followup care unless it is known or has been indirectly ascertained that he is professionally capable of rendering adequate patient care. Medical practice in an osteopathic hospital is not condoned, because the quality of patient care cannot be controlled. Neither are consultations permitted in situations where the osteopath remains responsible to carry out therapeutic recommendations beyond his capability. Consultations limited to laboratory or x-ray evaluations are permissible.

It is recognized that the foregoing principles will require continuing study during the next year.

2. It is recommended that the OSMA reaffirm its policy that there can never be an ethical relationship between a Doctor of Medicine and a cultist; that is, one who does not practice a system of healing founded on a scientific basis.

3. It is recommended that the OSMA reaffirm its policy that the matter of hospital staff membership is rightfully a decision for each hospital to make; the same standards used by a hospital in deciding whether staff privileges should be extended to a Doctor of Medicine should be used in deciding whether staff privileges should be extended to a Doctor of Osteopathy.

4. It is recommended that the AMA policy, approved in December, 1968, be received by the OSMA for information only.

5. It is recommended that the OSMA policy to permit osteopaths to participate in certain postgraduate education courses offered by the OU School of Medicine be continued for another year on an experimental basis.

6. It is recommended that the Committee on Osteopathy schedule a series of meetings with the State Board of Medical Examiners and OSMA Legislative Committee to determine the feasibility of recommending new state legislation for licensure.

7. It is recommended that the Committee on Osteopathy establish informal liaison with members of the osteopathic profession; further, that the committee make itself available for consultation with county medical societies, hospital staffs, individual medical doctors and osteopaths, regarding problems involving interprofessional relationships.

Excerpt from the Oklahoma Osteopathic Association Business Meeting, March 18th, 1969.

*“Resolution:* That the Oklahoma Osteopathic Association, assembled in the General Business Session of the Annual Convention go on record as rejecting the American Medical Association plan for amalgamation and shall reaffirm full support of the position of the House of Delegates of the American Osteopathic Association and the Board of Trustees in

maintaining the independence of the American Osteopathic Association and the osteopathic profession as a separate and distinct school of medicine.”

*SECTION VII*

*COMMITTEE ON PHARMACY*

During the past year your Committee on Pharmacy's activities have been limited. No legislation was introduced in the State Legislature that required our attention and we received only one grievance report.

Regarding this grievance, we must report that we were not given enough information to give it a proper hearing. The person making the complaint was informed of this and was told that the Committee on Pharmacy was willing to hear the complaint if additional details could be forwarded to the committee.

Since no additional information was forthcoming, the grievance could not be heard.

In view of the importance of a pharmacist being involved in the “health team” approach to public health, the necessity of continued liaison between the medical profession and the pharmacists can easily be seen.

*Recommendations:*

It is recommended that the activities of the OSMA Committee on Pharmacy be continued on an indefinite basis and that it continue its general liaison efforts with the profession of pharmacy.

*Report of the  
COUNCIL ON PUBLIC POLICY  
(APPROVED)*

*Council Members*

- Rex E. Kenyon, M.D., Oklahoma City, Chairman  
Frank W. Clark, M.D., Ardmore  
F. David Kalbfleisch, M.D., Lawton  
Raymond F. Hain, M.D., Oklahoma City  
James B. Eskridge, III, M.D., Oklahoma City  
M. H. Newman, M.D., Shattuck  
Powell E. Fry, M.D., Stillwater  
Tom S. Gafford, M.D., Muskogee  
Harlan Thomas, M.D., Tulsa  
Floyd T. Hubbard, M.D., Henryetta  
Thomas C. Points, M.D., Oklahoma City  
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Mrs. J. Hartwell Dunn, Oklahoma City

*Medical Heritage Committee*

George H. Garrison, M.D., Oklahoma City, Chairman (and Mrs.)

Dr. and Mrs. Joe L. Duer, Woodward

Dr. and Mrs. Wayne Starkey, Altus

Dr. and Mrs. Clinton Gallaher, Shawnee

Mrs. Frank Flack, Tulsa

Dr. and Mrs. E. C. Mohler, Ponca City

Dr. and Mrs. J. F. York, Madill

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*Public Relations Committee*

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Lynwood Heaver, M.D., Tulsa

Donald R. Resler, M.D., Oklahoma City

James V. Miller, M.D., Ardmore

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M. Joe Crosthwait, M.D., Oklahoma City

Virgil Ray Forester, M.D., Oklahoma City

Jake Jones, M.D., Shawnee

Mrs. Joseph Kelso, Oklahoma City

*Committee on Laboratory Quality*

Raymond F. Hain, M.D., Oklahoma City, Chairman

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Jake Jones, Jr., M.D., Shawnee

A. Standley Porter, M.D., Oklahoma City

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*State Legislative Committee*

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Robert W. King, M.D., Oklahoma City

Hayden H. Donahue, M.D., Norman

John W. Drake, M.D., Oklahoma City

Stephen J. Adelson, M.D., Tulsa

E. M. Farris, M.D., Oklahoma City

Mrs. J. R. Stacy, Oklahoma City

Richard Stansberry, M.D., Oklahoma City

C. Riley Strong, M.D., El Reno

Edgar W. Young, Jr., M.D., El Reno

Harlan Thomas, M.D., Tulsa

Hugh Perry, Jr., M.D., Tulsa

A. B. Colyar, M.D., Oklahoma City

SECTION I  
COUNCIL ACTIVITIES

With the committee structure organized under the Council on Public Policy, and the resultant delegation of functions, the Council's mission is to generally supervise the committee activities under it and to take primary jurisdiction for representing the association in matters involving Federal legislation.

During the last two sessions of Congress, there has been little to do in the nature of an organized campaign on a major piece of legislation. On problems occurring in Washington, the Council must rely on directives from the American Medical Association, and these have been received and acted upon item-by-item without the apparent necessity for a grass roots effort as previously employed on such matters as Medicare.

A major reorganization within the AMA structure is now underway. Last September it was announced that the Division of the Field Service (formerly providing legislative liaison with the state associations and county medical societies) was being replaced by a new Division of Public Affairs. In turn, the announcement said, the Division of Public Affairs would amalgamate the field staffs of the Field Service Division and the American Medical Political Action Committee. Moreover, the report stated that the new division would assume much broader responsibilities than carried out heretofore.

The amalgamation of field staffs has taken place, and 12 AMA field offices staffed by 12 representatives of the new division are assigned as regional liaison representatives to the AMA constituent societies. Oklahoma's regional office is in Dallas, staffed by Mr. Dave Morrison (formerly of AMPAC), and in addition to Oklahoma the regional office covers the states of Texas, New Mexico and Arizona.

Although the specific operational plans and scope of activities of the new division are still in the formative stage, it can be assumed that a more vigorous and more broadly-based approach to Federal legislation is in the offing. Concomitantly,

it can be expected that the Division of Public Affairs will be engaged in a much more diversified effort in the socio-economic, public relations, public education (internal and external) and non-partisan political education fields. In short, the new division, as a link between the AMA and its constituent organizations, will be designed to strengthen medicine's voice in public affairs, both from the standpoint of discharging responsibilities to the public and from the aspect of preserving the freedom of medicine through a more aware profession and a more understanding public.

The Division of Public Affairs will not engage in candidate support; this function will remain with the American Medical Political Action Committee.

Meanwhile, the Council on Public Policy awaits specific knowledge of its role in the new network of national communications which is being established.

The OSMA Council is carrying out its responsibility to maintain the best possible liaison with Oklahoma Congressmen and Senators. During May a group representing all Congressional Districts will call on Oklahoma lawmakers at their offices in Washington, as previously directed by the House of Delegates.

SECTION II  
MEDICAL HERITAGE COMMITTEE

Your Medical Heritage Committee has been relatively inactive during the past year. The inactivity was not from a lack of interest, but a lack of space available for storage, preparation and display of articles, equipment, manuscripts, etc. pertaining to early Oklahoma medicine which have been offered to members of the committee. An abundance of this material is being held in the hands of private individuals until such time as proper housing becomes available.

At present the committee is reasonably assured of adequate space in a most favorable location in the new library building of the medical center complex in Oklahoma City. It is expected that that facility will be completed in the near future.



As a stopgap measure, your committee has asked the OSMA Board of Trustees to allot a small amount of space in the new headquarters building for storage of historical medical artifacts. We realize that this space will necessarily be limited. However, even a limited amount of space will allow us to preserve some of the artifacts that would otherwise be lost.

Until such time as sufficient space is available, the functions of the committee will necessarily continue to be limited.

#### *Recommendations:*

1. It is recommended that the Medical Heritage Committee be continued with the ultimate purpose of having a "Medical History in Oklahoma" display located in some appropriate place.

2. It is further recommended that the OSMA House of Delegates urge and encourage all Oklahoma physicians to seek out and preserve, as best they can, the artifacts and manuscripts that best depict the medical history of this state.

### *SECTION III*

#### *PUBLIC RELATIONS COMMITTEE*

During the past year your Public Relations Committee has continued or undertaken several different projects. Activities have been as follows:

1. The association's five-year-old weekly health column, "A Message From Your Doctor," continues to be carried by about 40 state newspapers each week. If the newspaper space commanded by the column was purchased as advertising, the cost would be approximately \$25,000 annually. This column is produced solely by the OSMA staff.

2. The association's monthly newsletter is now in its third year of publication. The *OSMA News* is a six-page newsletter published nine months each year beginning in September and ending the following May. It is mailed to the member-physician's home to facilitate the dissemination of information to the physician's family.

3. Periodically during the past year, a series of public service radio announcements was distributed to

all Oklahoma radio stations. These announcements deal with current health topics and health reminders of interest to the general public.

4. In connection with the OSMA Legislative Committee's "Legislative Doctor of the Day" program, a story is produced for each physician's hometown newspaper. The stories are released the week prior to his day of service. The stories serve a twofold purpose by (a) informing the doctor's patients that he will be out of his office on a certain day, and (b) creating a good public relations image for the association.

5. Special projects have been undertaken, such as press conferences, reaction stories to news events, and working with newspaper writers or reporters in conceiving, researching and placing medical stories in major newspapers.

6. Again, during the past year the OSMA participated in the promotion of National Community Health Week in cooperation with the AMA. This promotion consisted of special radio spot announcements, television spot announcements, newspaper feature articles, news stories, newspaper ads, and a special proclamation from the Governor proclaiming Community Health Week in Oklahoma. During the week, physician television appearances were arranged for all major stations in Oklahoma City and Tulsa. In addition, a special health exhibit was borrowed from the AMA and exhibited in Shepherd Mall Shopping Center, Oklahoma City, and Southroads Mall in Tulsa. The exhibit, "The Transparent Woman," drew a great deal of public interest and was featured on television and in newspapers.

7. Your association joined with the Oklahoma State Health Department to co-sponsor "Immunization Month" during March in Oklahoma. Again, a Governor's Proclamation was used to launch the special month-long educational program. Promotion consisted of radio and TV announcements, newspaper feature articles, news stories, and newspaper ads. The health column during the month of March was devoted entirely to "Immunization Month."

8. Physician-speakers, represent-

ing the OSMA Speakers Bureau, have filled 42 speaking engagements during the past year. The bureau was created in late 1967 and currently has 37 physician-speakers participating in it. Your association has promoted use of the Speakers Bureau through a brochure that offers the service to all major Oklahoma service clubs (Kiwanis, Rotary, Lions, etc.).

9. Throughout the past year your association has answered hundreds of telephone and written requests for information on health subjects. The executive office maintains an extensive file of film and printed material catalogs to assist people seeking such information.

#### *Recommendations:*

1. In order to further internal relations, it is recommended that the Public Relations Committee be directed to work with the Medical School Liaison Committee to create a medical practice seminar for medical students. Such seminar to be used to familiarize medical students with the AMA, OSMA, insurance programs, medical-legal subjects, practical aspects of medical practice, and other subjects that a young physician should be familiar with before going into practice.

2. It is further recommended that the Committee on Public Relations institute a program to familiarize county society committees with public relations techniques that can be utilized on the local community level.

### *SECTION IV*

#### *COMMITTEE ON LABORATORY QUALITY*

Following action taken by the House of Delegates at the annual meeting in May, 1968, a committee was appointed to study the feasibility of a voluntary laboratory surveillance program for association members.

The committee entered into an agreement with the College of American Pathologists whereby the survey program conducted by CAP for small hospitals would be made available to Oklahoma physicians. All association members were offered the opportunity to join the check sample program at a cost of \$100.00 (\$87.50 to CAP and \$12.50 for OSMA



costs). The cost of the program was more than the \$50.00 originally envisioned by the study committee. However, because of the quality and comprehensiveness of the survey the committee felt it was the best program available.

Twenty-five different groups representing from 175 to 200 physicians are enrolled in the program.

Through agreement with the "College," one anonymous copy of the survey results will be forwarded to OSMA headquarters. The committee hopes to evaluate these reports for the purpose of recommending future laboratory programs.

We have been advised by the College that a "petite" program designed for the physician's office laboratory will be available for 1970, the cost of which will be approximately \$25 to \$30.\*

The committee feels that these survey programs will benefit the practicing physician by improving his lab results and will indicate to the public and governmental authorities that organized medicine is attempting (without government intervention) to upgrade the medical care rendered in our state.

#### *Recommendations:*

1. Continuation of the committee.
2. Evaluation and analysis of results from 1969 survey for presentation to Board of Trustees.
3. Use of the "petite" survey for the 1970 program.
4. Development of a manual defining minimum standards for the physician's office laboratory.

#### *SECTION V*

#### *STATE LEGISLATIVE COMMITTEE*

OSMA's Legislative Committee began its organizational year with several specific objectives:

A. The collection, assimilation and dissemination of information regarding state legislation.

B. The development of an effective communications system between

our society and the legislature.

This report will deal with the programs initiated to accomplish those objectives and the results of our legislative efforts.

#### *A.*

#### *THE COLLECTION, ASSIMILATION AND DISSEMINATION OF INFORMATION REGARDING STATE LEGISLATION*

##### *1. The Collection of Information*

Shortly after the committee was formed, a series of requests soliciting legislation information was mailed to presidents of constituent societies, recognized medical specialty groups, allied health organizations, medical institutions and the administrative heads of health agencies. These requests produced a generous response of legislative programs. The respondents were invited to present their legislative proposals to a special meeting of the committee, at which we discussed the merits, effect and the potential outcome of each bill.

In addition to the information secured above, the committee maintained a close liaison with the staff of the Legislative Council (responsible for bill drafting) and many times secured, in advance, legislative proposals being drafted for members of the legislature.

##### *2. The Assimilation of Information*

After the committee was aware of the proposals that were to be introduced in the First Session of the Thirty-Second Legislature, we began a thorough scrutiny to develop a position based on existing OSMA policy and on our legislative program. Members of the committee with special medical knowledge in specific areas were asked to study the proposed bills and report to the committee. On January 5th, two days after the session opened, your committee met to finalize positions on approximately 15 bills that had a definite impact upon the medical community.

Having developed positions, the committee requested each specialty group within the state to supply us with specially qualified physicians

for testimony before legislative committees.

##### *3. Dissemination of Information*

Realizing the importance of collective support of association members, the committee embarked upon a major campaign to inform the membership of legislative proposals. Monthly articles were written for the *OSMA News* and the *OSMA Journal* giving details of current legislation and the committee's position. On two occasions the committee gave informational reports to the Board of Trustees. On January 19th a State-wide Legislative Conference was conducted for over 200 members of the association who had a special interest in legislative affairs (selected by virtue of a personal relationship with their lawmaker). Over 80 members of this "Legislative Liaison Council" attended the all-day conference devoted to an explanation of the legislative process, pending legislation and the committee's position on specific bills.

The committee provided the members of the council with notebooks containing the introduced legislation, an abstract explanation of each bill and our position. Weekly, members of the council received copies of the new bills introduced and a "Legislative Reporter" explaining the status of each bill included in the book.

#### *B.*

#### *THE DEVELOPMENT OF AN EFFECTIVE COMMUNICATIONS SYSTEM BETWEEN OUR SOCIETY AND THE LEGISLATURE*

An effective communication with the legislature requires two essentials:

1. A consistent and almost daily contact with legislative members by the staff of OSMA and the Legislative Committee.

2. Periodic contacts by members of the association through mail, telephone, "Doctor of the Day," etc.

##### *1. Daily Contact with Legislature*

The members of the committee and the staff have maintained personal contact with members of the legislature by visiting the capitol

\*We hope to be able to offer the program to Oklahoma physicians, thereby increasing our enrollment in laboratory programs.



frequently, testifying on certain bills, hosting one dinner meeting for the House Public Health Committee, and frequent after-hours visits with small groups and individual members. The committee's direct communication with the legislature has been both effective and fruitful. We have been consulted innumerable times on medical legislation, we have been asked to draft special bills and we have used our AMA resources to provide technical information on subjects with which we were not familiar.

Through the use of a commercial reporting service, we have been able to maintain a close eye on the activities of the legislature with a minimum of staff time.

## 2. Periodic Contact by OSMA Members

Probably the most effective program for the building of rapport between Oklahoma physicians and the Oklahoma Legislature is the "Doctor of the Day" program. This program, now in its fourth year, provides the physician attending the Capitol First Aid Station the opportunity of witnessing the legislative process firsthand, and provides the legislator that all important opportunity of receiving in his capitol office, a member of his constituency. Annually between 50 to 100 physicians participate in the program.

The "Legislative Liaison Council," established through contact with members of the legislature, could be our most effective communication tool if we could secure a proper response. The council is selected on the basis of friendship or acquaintance with members of the legislature. Weekly, they receive information on the current status of bills pending in both the House and Senate, with a request for action. Unfortunately, our legislative activities were such this year that it is difficult to determine how effective the council's response was. However, it is felt that this program should be continued until it can be properly evaluated. The committee has consistently published in the *OSMA Journal* and the *OSMA News* articles regarding current legislation.

## C.

### OKLAHOMA MEDICAL POLITICAL ACTION COMMITTEE

The committee would like to commend the Oklahoma Medical Political Action Committee for its financial support of 26 candidates for state office. These contributions, although in no way connected with your legislative committee, did demonstrate to Oklahoma lawmakers that the medical profession's interest in state government goes beyond medical legislation. We would encourage all members of the association to actively support, financially and with participation, the activities of the Oklahoma Medical Political Action Committee.

## D.

### RESULTS OF THE LEGISLATIVE PROGRAM

The legislative program for this year has been one of reaction. The committee has assisted other groups and agencies and the legislature in supporting or opposing legislation, but we initiated no legislative proposals.

At the request of an interim committee, your association through its Occupational Medicine Committee and the Legislative Committee did an admirable job in drafting bills and providing expert medical testimony on Oklahoma's Workmen's Compensation Laws.

The Medical Laboratory Licensing Act, originally the result of reaction to proposed legislation, was supported very strongly by your committee, although the bill was introduced through the State Health Department. This bill created one of the largest controversies this session and is being held over until the second session.

Following is a brief report of the bills *actively* watched by your committee, our position and the current status:

- H.B. 1020—Repeal of the 1965 Psychologists Licensing Act  
No position—held over.
- H.B. 1022—Medical Laboratory Licensing Act  
Supported—held over.

- H.B. 1047—Expansion of County Boards of Health  
Supported—held over.
  - H.B. 1054—Uniform Anatomical Gift Act  
Supported — passed and signed.
  - H.B. 1143—Workmen's Compensation—Treatment by spiritual means  
Did not approve—held over.
  - H.B. 1144—Workmen's Compensation Medical Panel  
Supported—held over. (At the request of Governor Bartlett, OSMA and the Industrial Court will establish a medical panel along the general outline of the proposed legislation.)
  - H.B. 1150—Workmen's Compensation—Waiver Amendment  
Supported—held over.
  - H.B. 1357—Compulsory Practice Act  
Opposed—held over.
  - H.B. 1363—Ophthalmic Dispensers Act  
No position—held over.
  - H.B. 1369—Free Choice of Practitioner  
Opposed—held over.
  - H.B. 1410—Temporary Hospitalization of Mentally Ill  
Supported—held over.
  - H.B. 1033—Health Department Appropriation  
Supported—held over.
  - H.B. 1203—Required Immunization Act  
Supported—held over.
  - H.B. 1207—Mental Health Services Act  
Supported—passed.
  - H.B. 1208—Mental Health Appropriations  
Supported—held over.
  - H.B. 1323—Hospital Lien Act  
Supported—passed.
  - H.J.R. 1033—(As Amended) Removed responsibility of hospital staff to select competent qualified physicians and surgeons  
Opposed—killed.
  - S.B. 114—Add pharmacist to Board of Health  
Supported—held over.
- As the above list indicates, many medical bills will be carried over into the Second Session of the Thirty-



Second Legislature. These bills along with others that are certain to be introduced in the last days of the First Session and during the interim will require that the OSMA become even more active at the capitol.

The committee wishes to emphasize to the House of Delegates that our work on state legislation is a 12-month endeavor. With the legislature meeting each year and with an active Interim Legislative Council, we are often faced with as many decisions to make in the Summer and early Fall as we are during the sessions.

Your Legislative Committee earnestly requests the support of this governing body and all the members of the Oklahoma State Medical Association in assisting this committee in carrying out its charge. We would like to re-emphasize the necessity of the local physician and constituent societies in building an effective rapport with members of the state legislature. We are more convinced than ever that the most effective influence on a lawmaker's action is the desire of his constituents. Because the Oklahoma physician is a highly respected member of his community, his opinion as an individual and member of an organized group is considerably respected.

#### *Recommendations:*

1. That the OSMA Public Relations Committee meet jointly with the Legislative Committee to coordinate a public relations program in conjunction with the legislative program.

2. That the House of Delegates authorize the continuation of the Legislative Liaison Council.

3. That the committee be granted continued authority to develop and present policy statements to future sessions of the legislature.

4. That the House of Delegates reaffirm its approval of the "Doctor of the Day" program and approve the cooperative arrangements with the Oklahoma Chapter of the American Academy of General Practice

in staffing the First Aid Station at the capitol.

5. That this committee be granted the authority to continue to work with members of the profession, constituent societies, allied health groups and others in an effort to initiate legislation that will be in the best interest of the profession.

6. That the State Legislative Committee be granted a budget of \$3,000.00 to be used in carrying out its responsibilities.

7. That a medical student, selected by the Oklahoma Chapter of the Student American Medical Association, be appointed to the State Legislative Committee as an ex officio member.

### Report of the COUNCIL ON SOCIO-ECONOMIC ACTIVITIES

(APPROVED AS AMENDED)

#### *Council Members*

B. C. Chatham, M.D., Chickasha,  
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Ann K. Kent, M.D., Muskogee

Charles Bodine, M.D., Oklahoma  
City

Robert Sukman, M.D., Oklahoma  
City

Walter E. Brown, M.D., Tulsa

Thurman Shuller, M.D., McAlester

James P. Bell, M.D., Oklahoma City

Richard W. Loy, M.D., Pawhuska

Harold Stout, M.D., Waurika

Roger Reid, M.D., Ardmore

Mrs. Scott Hendren, Oklahoma City

#### *Medical Insurance Review*

##### *Committee*

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Earl M. Bricker, M.D., Oklahoma  
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Fred D. Switzer, M.D., McAlester

Jack O. Alexander, M.D., Ponca City

Robert A. McLauchlin, M.D., Oklahoma City

Mark D. Holcomb, M.D., Enid

Robert J. Hogue, Jr., M.D., Guthrie

Howard B. Keith, M.D., Shattuck

Charles R. Gibson, M.D., Chickasha

*Committee on Prepaid Medical Care*

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B. H. Gaston, M.D., Muskogee

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Richard W. Loy, M.D., Pawhuska

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Neil B. Kimerer, M.D., Oklahoma  
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William L. Parry, M.D., Oklahoma  
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*Committee on Occupational Medicine*  
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E. Edwin Fair, M.D., Ponca City

John A. Blaschke, M.D., Oklahoma  
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Jack L. Richardson, M.D., Tulsa

Robert L. Lembke, M.D., Ponca City

E. F. Lester, M.D., Oklahoma City

Gifford H. Henry, M.D., Tulsa

William G. Mays, M.D., Tulsa

Bob J. Rutledge, M.D., Oklahoma  
City

R. Barton Carl, M.D., Oklahoma  
City

William W. Schottstaedt, M.D., Oklahoma City

Casper H. Smith, M.D., Duncan

#### *Committee on Governmental*

##### *Relations*

Robert Sukman, M.D., Oklahoma  
City, Chairman

Mark R. Johnson, M.D., Oklahoma  
City

Ross Deputy, M.D., Clinton

Rayburne W. Goen, M.D., Tulsa

William C. McCurdy, M.D., Purcell

James W. Owen, M.D., Bartlesville

Arnold G. Nelson, M.D., Midwest  
City

Casper H. Smith, M.D., Duncan

William B. Renfrow, M.D., Oklahoma City

Jack D. Fetzer, M.D., Woodward

Mrs. Harlan Thomas, Tulsa

### SECTION I

#### *Council Activities*

The Council itself, in addition to guiding the activities of the committees under its direction, has been primarily concerned with maintaining liaison for the OSMA with the Oklahoma Health Economic Council (OHEC).

Our progress with the implementation of OHEC has not been remarkably encouraging to date, but we now believe that evidence of our



effort to carry out health economic education throughout Oklahoma will come to fruition in the near future.

First, this report will briefly cover the background and development of our involvement with OHEC, then it will cover recent events which give support to our belief that meaningful results are to be obtained.

OHEC was created by the findings of the Oklahoma Health Economic Survey, a 1965-1967 effort to measure the health economic situation in Oklahoma, a project jointly sponsored by the OSMA, the Oklahoma Hospital Association and Oklahoma Blue Shield. The results of the survey (based on an intensive study of 1,500 hospitalized cases and the manners in which their financial obligations to doctors and hospitals were met) have been reported previously to the House of Delegates. Generally, however, the survey revealed that only about one-half of Oklahomans possessed medical and hospital insurance . . . too much of the health insurance was of substandard quality . . . and that there was a general need to upgrade both quantity and quality through a health economic education program.

The OHEC organization was then created, to be governed by a council comprised of representatives of medicine, the hospital association, industry, agriculture and labor. Current OSMA representatives on the OHEC council are B. C. Chatham, M.D. (chairman), Thomas C. Points, M.D., and Richard W. Loy, M.D.

It was decided initially to carry out a three-year public information program designed to improve the situation regarding the private sector of health care financing. In addition, another goal was to inspire the development of a superior product of health care financing to offer to and through the private sector in an effort to discourage further government intervention into the health field. Further, it was decided to finance this operation by contributions from the three original sponsoring organizations in the total amount of \$36,000 the first year and \$18,000 for each of the next two years. Thus, the OSMA's commit-

ment for the three-year period amounted to \$24,000. Funds for this purpose were appropriated by the 1967 House of Delegates.

A prototype prepayment plan was developed jointly by Oklahoma Blue Shield and the OHEC council, and this later received the endorsement of the House of Delegates. The purposes of this plan were to provide expanded benefits to Blue Shield subscribers, to pay physicians more equitably based upon the principle of "usual, customary and reasonable" fees, and through the combination of these innovations to enlarge the enrollment of Oklahomans in a high-quality mechanism for meeting the costs of illness. This prototype was in keeping with OHEC's overall objective to fill the vacuum that the survey revealed in the quality and quantity of health protection held by the private sector, and thus to thwart the opportunity for government to assume financial responsibility for larger and larger segments of the population.

Following House of Delegates approval of the general prototype, the development of the project was delegated to the OSMA Prepaid Medical Care Committee for implementation (see this committee's report for further information). This project is felt to be a mark of progress which emanated from the efforts of the Council on Socio-Economic Activities and the Oklahoma Health Economic Council.

Regarding the next phase of the OHEC operation . . . to generate a higher level of public understanding of health economics . . . progress has been slow to develop. First, considerable time elapsed before a part-time director could be employed. It was not until 1968 that the implementation phase of the public information project got underway. Secondly, financial contributions were not as great as anticipated (OSMA and Blue Shield carried the bulk of the load, although the Oklahoma Hospital Association and the United Automobile Workers also contributed).

To date, a total of \$10,177.00 has been spent (\$3,725 from the OSMA).

The bulk of these expenditures were necessarily allocated to the operation of a part-time staff and office facilities.

Work accomplished to date includes: (1) The development of a "position paper" to provide the framework for a public information program; (2) Sample speeches on health economics for use before civic clubs and other public audiences were developed and used quite extensively; (3) A plan was developed for carrying out multi-phasic and intensive public information campaigns at the county and community levels; (4) A folder entitled "A Health Insurance Buyer's Guide" was developed for massive distribution; and, (5) An extensive file of health economic statistics and information was assembled.

It was at this point, however, that the Executive Committee came to the reluctant realization that the program was under-funded for the purpose of carrying out the public information program. Contributions were not forthcoming to the extent of doing anything except meeting overhead expenses . . . nothing was left for the actual production of materials for a large-scale mechanism for carrying our message to the public. Further, the OSMA and Blue Shield, the principal financial backers, did not feel they could carry much more in the way of additional contributions.

Thus, on March 9th, 1969, the Chairman of OHEC, Doctor B. C. Chatham, reported to the Board of Trustees that it had been reluctantly decided to discontinue the staff and separate OHEC office in the interest of using the funds that were available for the production of public information materials. "Volunteer" effort from the existing staffs of the sponsoring organizations will replace the former specialized staff.

The Board of Trustees approved the revised mechanism for carrying out the objectives of OHEC.

It is anticipated that the next organizational year will see evidence of our efforts in the form of a public information campaign. Moreover, to alleviate the financial bind



(and to broaden our base of operations) efforts are being made to affiliate with the better-established Oklahoma Council on Economic Education, a group which is primarily working toward the development of curriculum materials on economic subjects to be taught in the secondary school system. Finally, consideration is being given toward the creation of a private foundation for the purpose of attracting funds from sources outside the health care industry.

In summary, OHEC is not dead; it is merely seeking ways and means to stretch the available dollar to achieve the optimum benefit in public education in the field of health economics. At the same time, new funds and new and fruitful affiliations with other organizations of comparable philosophy are being sought.

## SECTION II

### *Prepaid Medical Care Committee*

As pointed out in the previous section, the Prepaid Medical Care Committee was given the responsibility of developing a more comprehensive health insurance program through Oklahoma Blue Shield as a tool to provide more Oklahomans with high-quality health protection.

In general terms, the program was to include short, intermediate and long-range objectives to provide better subscriber benefits, and to develop a system to pay physicians on the basis of "usual, customary and reasonable" fees.

The House of Delegates said in 1968: "This program will not only provide more equitable payments to the medical profession, but will represent a much greater bargain to Blue Cross and Blue Shield insureds by extending the scope of benefits—by affixing a more predictable value to the coverage afforded—and by providing a range of options to suit the financial abilities of the bulk of Oklahoma's middle income families."

With specific respect to the new concept in Blue Shield, here are the developments to date:

#### *A. Scope of Benefits:*

Two types of UCR programs will be offered. The *Basic Plan* will cover: surgery; anesthesiology; in-hospital medical care from the first day to the 90th day (30 days for mental and nervous conditions); maternity (including pre- and post-natal care, plus newborn care during mother's confinement); radiology benefits when billed by the physician for accidental injury; and tissue exams. An optional *Extended Care Plan* will cover the same benefits of the Basic Plan plus: out-of-hospital diagnostic laboratory and x-ray; assistant at surgery; consultation (limit of one per physician per confinement); and concurrent medical care for conditions not related to the surgery and rendered by other than the surgeon.

Blue Shield will continue to market its present 300 and 400 contracts, but it is anticipated that these programs will be changed by paying from the first day on inpatient medical care and by extending the number of compensable inpatient days.

#### *B. Enrollment Options:*

Subscribers may enroll at 100 percent payment for the above services, 90 percent, 80 percent, or 70 percent.

#### *C. Mechanism for Payment:*

The term "UCR" is defined by Blue Shield (and has been approved by the House of Delegates) as follows:

—"Usual Charge" refers to the amount which the individual physician usually and most frequently charges all his patients for a specific professional service.

—"Customary" relates to the range of usual charges made by physicians of similar ability and experience for the same service within the specific socio-economic area.

—"Reasonable Charge" is that charge which meets both the Usual and Customary criteria as defined above, or is justified due to the complexity of treatment which merits special consideration. (NOTE: The Blue Shield definition of UCR is compatible with that of the AMA, while the definitions used by Medicare and Medicaid are not.)

A physician may direct that pay-

ment be made directly to the patient, or the patient may assign the benefit to the physician.

In cases where a fee is questioned, a Blue Shield medical advisor or advisory committee will determine whether there are unusual circumstances (additional information may be obtained from the doctor), and if such are found, the charge will be paid; if a question still remains, and no agreement can be reached between Blue Shield and the physician, the case shall be referred to the appropriate Medical Insurance Review Committee established by the medical profession; if the physician refuses to accept the recommendation of his peers, payment will be made directly to the member and will be based on the physician's previously accepted usual charge or the average charge in the physician's community, whichever is greater.

A physician may change his usual charges by filing a written 90-day notice with Blue Shield, giving the reason for the increase. If the new fee or fees exceed the upper limit of the customary range of fees in his economic area, his charges will be recognized when they fall within the prevailing or customary range of fees in his economic area.

It is not anticipated that a great number of claims will be questioned. Blue Shield will maintain active liaison with the OSMA to assure a smooth and equitable operation of the program.

Where a subscriber purchases UCR coverage which does not cover 100 percent of the physician's charges, the physician may collect the balance directly from the patient.

#### *D. Implementation:*

The UCR program is already in effect for some 75,000 persons who are covered under the Federal Employees Program, and for thousands of others covered under CHAMPUS (for dependents of servicemen).

It is expected that the program will be extended to the private market in late 1969 or early 1970.

#### *E. Claim Form:*

The Prepaid Medical Care Committee worked with Blue Shield to develop a new claim form to accom-



moderate the new UCR program as well as the existing Blue Shield plans. This was felt to be acceptable and was approved for national accounts by the National Association of Blue Shield Plans, by the Department of Defense (CHAMPUS), and by the Civil Service Commission.

However, when it was released in sample form to the medical profession in Oklahoma, objections were raised by a major county medical society and by individual doctors elsewhere in the state. Your committee arranged a meeting and the parties concerned reached a compromise agreement.

Subsequently, however, Blue Shield was able to obtain national approval for abandoning the new claim form in favor of the form which has been used and accepted in Oklahoma for several years.

#### *Recommendation:*

It is recommended that the Oklahoma State Medical Association continue to work with Oklahoma Blue Shield, through a close-liaison arrangement, to implement and further perfect the new UCR program.

### **SECTION III**

#### **MEDICAL INSURANCE REVIEW COMMITTEE**

Since July 1st, 1966, the association has maintained a fee review mechanism to adjudicate claims involving health care programs which pay physicians according to "Usual, Customary and Reasonable" fees (UCR).

The state association's committee serves in an appellate capacity, but may also take primary jurisdiction in cases where a county medical society has not chosen to appoint a committee or else denies original jurisdiction for some reason. This past year, 38 county medical societies have appointed review committees.

There is a tremendous volume of claims involving the payment system of UCR: Medicare, Medicaid, certain Blue Shield programs, and other private insurance programs. When literally hundreds of thousands of claims are considered, it is significant to note that only 167 cases have been referred by the carriers

into the review committee mechanism since July 1st, 1966.

The basic problem of a typical case involves the matter of over-utilization; seldom does a review committee receive a case where the amount of a charge is questioned. Medical visits at the office, home and nursing home of a frequency which appears to be disproportionate to the diagnosis constitute better than 90 percent of all review cases. The use of injectable medications, when equally efficacious oral or self-administered medications would suffice is a common misunderstanding of Medicare regulations and all too frequently becomes a subject for claims review.

It might be well to reiterate the claims review mechanism approved by the House of Delegates in 1966 and implemented since that time by the OSMA Medical Insurance Review Committee and its counterparts at the county medical society level.

The review plan provides that the carrier, in a case where the charge appears to be above the acceptable range for an area, shall first communicate with the physician in an attempt to settle the problem. Failing to do so, the case must be documented by the carrier (on a form provided by the OSMA) and referred to the appropriate county medical society review committee, and the physician shall be so advised. The committee shall attempt to act within 14 days, having the options of finding in favor or against the billed charges. If the charge is determined to be unreasonable, the committee is obligated to recommend a reasonable fee for settlement. The carrier should then notify the physician of his right to appeal to the OSMA committee. If the fee is ruled by the county committee to be reasonable, the carrier is morally obligated to accept this ruling, but may, in exceptional cases, appeal the case to the OSMA committee.

Most of the carriers involved follow the system quite well. The rules are observed and the cases come to the appropriate review committee with adequate documentation and a clear question as to

what part of the claim is to be reviewed. One exception is the Department of Public Welfare which has chosen the course of reducing the physician's fee first and then advising him of his right to appeal.

When the established system is followed, your review committee believes that questioned cases can be adequately resolved. Your committee is hopeful and optimistic that any problems with the Department of Public Welfare can be settled amicably in the near future.

#### *Recommendations:*

1. It is recommended that the Medical Insurance Review policy of the OSMA be continued for another year without basic changes since it has proven its worth as a peer review mechanism.

2. As an interpretation of this policy, it is recommended that cases not be heard by review committees in instances where the carrier has already made payment to the physician's satisfaction. (However, if payment is made, without prior committee review, to the dissatisfaction of the physician, he may still exercise his right to appeal.)

3. It is recommended that negotiations be continued with the Department of Public Welfare to urge compliance with the OSMA claims review procedure.

4. It is recommended that study be given to the definition of a specialist. It is further recommended that the medical profession be allowed to determine the qualifications of a specialist in any medical field.

### **SECTION IV**

#### **GOVERNMENTAL RELATIONS COMMITTEE**

##### *Medicare and Medicaid:*

The purpose of this committee is to keep abreast of important actions of the various levels of government as they affect the medical profession or the public health. With nearly 200 Federal agencies involved in some form of health services, it will be impossible to cover thousands of problems in this report. Therefore, only some of the major developments will be covered.

A significant announcement was released in December by outgoing



Secretary of the Department of Health, Education and Welfare, Wilbur J. Cohen, in which he said, in effect that Part B of the Medicare Law (physicians payments) would be underfunded from July 1st, 1969 through June 30th, 1970.

Although his actuaries recommended a minimum increase in premium of 80c per month per beneficiary, in order to meet incurring obligations, Mr. Cohen elected to commit the government for at least the next year at the present premium (\$4.00 each from the subscriber and the government). By doing so, he proposed to overcome the anticipated deficit by issuing an order that physician fee increases would be virtually denied during this period. The profession, therefore, has a "fee freeze" in effect, except in rare instances.

He proposes through this "economy" to save about \$200 million during fiscal year 1970 by demanding that physicians underwrite a part of the Medicare program by holding income at a fixed level in the face of rising operational costs. The statement included an appeal for physicians to hold down utilization of the program.

Moreover, he has suggested that the beneficiaries of Medicare should be completely relieved from financial responsibility for Part B premiums, thereby transferring the whole load to employers and employees.

Thus far the Nixon Administration has shown little signs of encouragement. In fact, Under Secretary Veneman of the Department of HEW has revealed his department's budgetary recommendations concerning Medicaid (Title XIX) payments to physicians, as follows: "The following actions are proposed to limit further increases in the cost of the Medicaid program: (1) payment schedules will be established for doctors and dentists which are based on the prevailing Blue Shield payment plans for non-governmental medical service . . ."

Mr. Veneman is obviously confused about Blue Shield's methods of op-

eration throughout the country. There are indemnity plans (such as in Oklahoma); in other states there are service plans with reduced fee schedules for low income groups; and, there are the embryonic efforts of Blue Shield nationwide to gradually convert to the UCR concept. At this time, no one knows what Mr. Veneman means when he says that payments under Medicaid are to be based on "the prevailing Blue Shield payment plans . . ."

The AMA president replied to Mr. Veneman by saying: "No universal pattern—no matter how many variations it may try to provide—can be imposed on the thousands of localities without wreaking havoc and probably increasing inefficiency and costs." He also chided Mr. Veneman for his effort to stem the tide of generalized inflation by singling out one small segment of society for aggravation.

National Blue Shield was not consulted by Mr. Veneman prior to the public release of HEW's intention to utilize the Blue Shield fee schedules. Blue Shield replied that most state plans were switching to UCR, the approach generally preferred by organized medicine, and consultations with government officials were requested in an effort to determine specifically what the government has in mind.

It should be obvious, however, that Mr. Veneman did not make his proposal with any thought in mind but to reduce compensation to physicians.

Meanwhile, the official policy of the Oklahoma State Medical Association runs contrary to both the action of Mr. Cohen and the announcement of Mr. Veneman. In May, 1966, before the implementation of the Medicare Law, the House of Delegates took the position that payment by the system of customary and reasonable fees is the only acceptable method of compensation regardless of the method of financing or the third party financial agency; it was recommended "that all purveyors of recognized health care services stand together in assuring their rights to receive the fair market

value for their services regardless of the source of payment, and that the granting of charity be recognized as the cherished right of the giver which is not to be sublet to the financing authority."

Therefore, in both the case of Medicare and Medicaid, the OSMA may soon be at the crossroads: Will we capitulate by underwriting benefits that the government has promised to a segment of society (and is now either unable or unwilling to pay reasonable fees), or will we adhere to our general policy that the government is not indigent and should expect to pay the reasonable market value for any health care promises it chooses to make?

#### *Government UCR Mechanisms:*

The Governmental Relations Committee, and Oklahoma physicians in general, have been plagued by a paradoxical situation in dealing with local carriers of governmental health care programs which pay physicians according to the UCR system.

Four carriers are involved: Aetna, the Department of Public Welfare and Travelers handle the administration of Medicare; Blue Shield handles the CHAMPUS program (dependents of servicemen); the welfare department is the carrier for Medicaid.

All of these programs are of government origin and all are to be based on paying physicians their "usual, customary and reasonable" fees. In the operation of the UCR system, it becomes necessary to develop a "profile" of each physician's "usual" charges, and to determine if his "usual" charges are in keeping with the "customary" charges of other physicians in his economic area; it is also necessary to identify economically homogeneous areas in order that prevailing ranges of charges may be equitably established.

The various government agencies have prevented these carriers, in some instances, from sharing certain information as to the systems they employ to administer programs which are essentially the same in concept. Thus, each carrier is using different techniques to try and arrive at the same answer: the eco-



conomic areas selected as the measure of the reasonableness of a given fee are apparently dissimilar in every instance.

Many problems have resulted from this situation. A fee that is reasonable for one carrier (performed by the same physician, same procedure) is found to be outside the "customary" range of fees by another carrier.

Your Governmental Relations Committee has taken note of the situation and is trying to get the carriers to at least standardize the systems they are using. This is not to say we are promoting a fixed fee schedule; rather, we are simply trying to arrive at a cooperative arrangement where the reasonableness of a doctor's charges will be put to the same test by the various carriers.

Our efforts in this respect have not been fruitful, principally due to problems at the national level.

#### *Comprehensive Health Planning:*

One of the most significant federally-sponsored programs in the state is the implementation of Public Law 89-749, the "Comprehensive Health Planning and Public Health Services Act." It is being operated in Oklahoma now under the direction of the State Health Planning Agency.

Since this program involves the development of health planning programs in the broadest sense, it is imperative that the medical profession (the only group of people fully licensed to care for the sick) become actively involved in the state planning effort, particularly by volunteering for service on the regional health planning councils which have and are being established throughout Oklahoma.

Toward this objective, the Governmental Relations Committee conducted a statewide "Conference on Comprehensive Health Planning" on November 17th, to which were invited the House of Delegates, county medical society officers, members of the Woman's Auxiliary, and other medical leaders throughout the state.

The program featured speakers who were either knowledgeable about health planning or who had formal responsibilities to direct phases of the program then underway in Okla-

homa. Our mission was to inform our medical leaders; it was not our purpose to endorse compulsory health planning but rather to develop a concerned professional group which would get involved in the planning process and provide expert guidance toward the achievement of realistic goals to improve health conditions in our state.

The program format received some constructive criticism, but your committee believes the results speak for themselves. Physicians are involved in health planning, and the net result of this involvement is much preferred, in our opinion, to taking the stance of ignoring a rather substantial program which may materially affect the way health services in Oklahoma are to be delivered in the future.

#### *Recommendations:*

1. The association has a policy of requiring that governmentally-financed health programs should expect to pay the market value for health benefits they choose to underwrite; it is not our policy to provide charity to the government, and, as taxpayers, we should not be expected to be taxed twice in the form of subsidizing government deficits simply because we are physicians. Therefore, it is recommended that the House of Delegates formally contact Oklahoma's Congressional delegation and request that Medicare and Medicaid either be funded in relationship to government obligations or that the obligations be reduced in accordance with funds available.

2. It is recommended that physicians pay special attention to re-emphasize their obligation and desire to care for sick people regardless of their ability to pay. Necessary medical care beyond the scope of government resources should be provided gratuitously as our sacred obligation to make available to all the special skills which we are privileged to possess.

3. Should the government choose to demand a reduction in the value of medical services, or should it choose to ostensibly purchase health services in full for a segment of society and then expect the medical profession to provide charity under

the guise of full payment, then it is recommended that a special meeting of the House of Delegates be immediately convened for the purpose of examining the conflict between our 1966 policy declaration and the conditions being imposed by the government.

4. Because governmental policies apparently prohibit or retard cooperation between the carriers of government health care programs as to the development of compatible systems for determining "Usual, Customary and Reasonable" fees, it is recommended that the House of Delegates bring this problem to the attention of the Oklahoma Congressional delegation in an effort to resolve a situation in which physicians are receiving dissimilar treatment under programs which are supposed to operate under the same general principles.

#### *SECTION V COMMITTEE ON OCCUPATIONAL MEDICINE*

Events in the past year outside the control of our association have required that the activities of your Occupational Medicine Committee reach near hectic proportions. These were as follows:

1. A series of expose articles by state newspapers condemning the procedures of the workmen's compensation court and attacking the medical profession.

2. A pledge by the Speaker of the House of Representatives that the Workmen's Compensation Law would be amended drastically or even recodified.

3. A summer-long investigation of workmen's compensation by members of the legislature.

4. A legislative request for innovative medical legislation regarding workmen's compensation.

5. A request by Governor Bartlett that an impartial medical panel be established to assist the Industrial Court.

These events dictated that the committee take positive and immediate action. On June 23rd your committee, through its chairman, delivered a prepared statement to the legislature's investigating committee.



The statement covered three areas of major concern: 1) Divergent medical testimony; 2) increasing medical costs; and 3) accident prevention. The committee emphasized to the members of the study committee that organized medicine was capable and willing to help solve the medical problems associated with the Industrial Court.

Recommendations covered in the statement included a study of a medical panel to advise the court, a request that physicians render impairment ratings rather than disability ratings, the use of OSMA's Medical Insurance Review Committee for settlement of disputed fees, and a special safety division be established within the Industrial Court.

Several times during the summer, members of your committee testified before the legislative body. We were asked to draft legislation to establish a medical panel that would help the court in cases where there was a wide divergence of medical testimony. We were asked to assist in the drafting of legislation which would provide a means for the waiver of compensable rights under certain conditions and we were asked advice on numerous matters that were indirectly related to medicine.

Eleven bills were drafted, as a result of the legislature's study, and introduced in the first session of the Thirty-second Legislature. Three of these proposals were of import to the profession. One bill established a medical panel, one provided for a medical waiver and one permitted the injured employee to seek treatment by prayer or spiritual means (the committee was opposed to the latter measure).

Unfortunately, representatives from labor and industry could not agree on *any* of the proposed bills and consequently they are being held over until the next lawmaker's session. Governor Bartlett, upon hearing the legislation had died, requested that the medical association work with the Industrial Court to establish the medical panel as outlined in the proposed legislation. With the cooperation of the court, a

panel is now in its formative stages. (A copy of the proposed rules and regulations are attached to this report.)

The committee would like to express its appreciation to the representatives of the various specialty groups who have cooperated in the formation of the panel. All of the state's recognized medical groups have been consulted for nominees to the panel. The panel has been selected and names will be submitted to the court within the next two weeks.

Although the committee is pleased that the medical panel has been formed, there are many areas of occupational medicine that still need attention. The state needs a safety program for industry, the profession needs to be more aware of good occupational health programs, of rehabilitation programs and preventive medicine programs. We need to build an effective liaison with other groups involved in occupational health and workmen's compensation. Members of this committee and your OSMA staff have met with leaders of industry to discuss our common problems. The medical-legal seminars held every two years help to bridge the gap between our professions, but more of these type meetings need to be conducted with medicine taking a leadership role.

#### *Recommendations:*

1. That the House of Delegates approve the Medical Review Panel as established for the Industrial Court.

2. That the committee be authorized to conduct meetings with industry, labor and the legal profession in an attempt to conquer our common problems.

#### **RULES AND REGULATIONS**

Oklahoma State Medical Association  
Medical Review Panel for the  
Industrial Court of the State of  
Oklahoma

#### **I. PURPOSE**

It is the purpose of the Medical Review Panel to review for the Industrial Court the medical aspects of those workmen's compensation cases that involve a divergence of medical opinion.

It shall serve the function of seek-

ing objective and qualified medical determinations for the Industrial Court of the State of Oklahoma.

#### **II. ORGANIZATION**

##### *A. Selection*

The Medical Panel shall be comprised of medical doctors selected by the Industrial Court from a list submitted by the Oklahoma State Medical Association. There shall be a minimum of 40 members, if available, selected as follows: Three (3) from the American Academy of General Practice; three (3) from each of the medical specialty fields recognized by the Oklahoma State Medical Association; twelve (12) orthopedic surgeons.

##### *B. Term*

Members are to serve for terms of one year each. Any member may be reappointed upon expiration of his term.

##### *C. Chairman*

The chairman of the Medical Review Panel shall be the Chairman of the Oklahoma State Medical Association's Occupational Medicine Committee and will serve at the pleasure of the President of the Oklahoma State Medical Association.

#### **III. JURISDICTION**

##### *A. Service*

The Medical Review Panel may be called into service by the Court when medical evidence produced by the claimant and/or the respondent is divergent to the extent that in the opinion of the Court an impartial examination is warranted.

##### *B. Findings*

Opinions expressed by the Medical Panel shall be used at the discretion of the Industrial Court but shall in any event become a part of the permanent case file.

#### **IV. PROCEDURE**

##### *A. Notification*

When an Industrial Court Judge decides that an impartial examination is warranted, he shall select from the Medical Panel a physician, of the specialty dictated by the case, to examine the patient. The examination is to be requested by a written court order. One copy of the court order is to be forwarded to the examining physician. One copy is to be forwarded to the Chairman, OSMA's Occupational Medicine Com-



mittee (P.O. Box 18696, Oklahoma City, Oklahoma 73118) along with copies of the medical testimony introduced by both the respondent and the claimant.

#### B. Examination

Upon receipt of an order requesting an examination, the physician shall, as expeditiously as possible, schedule the patient for examination. No previous medical records will be provided the physician. However, such records may be requested from the Industrial Court.

#### C. Report

After completion of the examination the physician shall within ten days forward to the Industrial Court a complete medical report providing information asked for by the Court and a determination of percentage of disability if applicable. In the event a complete report cannot be written because of a lack of information, a partial report is to be written and forwarded to the Court with a request for the additional information.

Two copies of the report are to be forwarded to the Industrial Court and one copy to the Chairman, OSMA's Occupational Medicine Committee.

#### D. Payment for Services

The panel member reviewing the case shall submit to the Court, attached to his report, a statement for his services.

#### E. Final Order

When the final court order establishing settlement of the case is written by the Court, one copy of the order is to be forwarded to the Chairman, OSMA Occupational Medicine Committee.

### VI. COURT PROCEEDINGS

#### A. Testimony

Any member of the Medical Panel who renders an opinion agrees to appear in Court for expert testimony.

### VI. MISCELLANEOUS

#### A. Information

Any information regarding the Medical Review Panel, its members or qualifications shall be furnished by the panel chairman.

#### B. Review

Twice annually or as often as the committee deems necessary, the records of the chairman shall be re-

viewed for recommendations to the Industrial Court and the Oklahoma State Medical Association.

#### Report of the COUNCIL ON PUBLIC HEALTH (APPROVED AS AMENDED)

##### Council Members

Hayden H. Donahue, M.D., Norman,  
Chairman

Marvin K. Margo, M.D., Oklahoma  
City

Armond H. Start, M.D., Oklahoma  
City

Wayne J. Boyd, M.D., Bartlesville

Gifford H. Henry, M.D., Tulsa

Joseph W. Kelso, M.D., Oklahoma  
City

Carl D. Osborn, M.D., Ada

Glen L. Berkenbile, M.D., Muskogee

A. B. Colyar, M.D., Oklahoma City

Paul A. Bischoff, M.D., Tulsa

Charles E. Smith, Jr., M.D., Okla-  
homa City

Bert T. Brundage, M.D., Thomas

F. Redding Hood, M.D., Oklahoma  
City

Robert E. Herndon, M.D., Chickasha

Eugene A. Owens, M.D., Lawton

George H. Guthrey, M.D., Oklahoma  
City

Mrs. Charles Bodine

##### Disease Screening Committee

James B. Silman, M.D., Norman,  
Chairman

Carol T. Ewing, M.D., McAlester

Adolph N. Vammen, M.D., Tulsa

Stephen J. Adelson, M.D., Tulsa

Jack M. Stephenson, M.D., Oklahoma  
City

Richard B. Price, M.D., Oklahoma  
City

William Schmieding, Ph.D., Okla-  
homa City, Ex Officio

Ben I. Heller, M.D., Oklahoma City

John A. Schilling, M.D., Oklahoma  
City

Leroy Carpenter, M.D., Oklahoma  
City

Tom Acers, M.D., Oklahoma City

Eugene Burgess, M.D., Oklahoma  
City

##### Medical Advisory Committee to State Board of Corrections

Donald L. Cooper, M.D., Stillwater,  
Chairman

Glen L. Berkenbile, M.D., Muskogee

William C. McCurdy, Jr., M.D. Pur-  
cell

Joe E. Tyler, M.D., Tulsa

Robert D. Grubb, M.D., Tulsa

Jack D. Spencer, M.D., Oklahoma  
City

##### Committee on Alcoholism

Charles E. Smith, Jr., M.D., Okla-  
homa City, Chairman

John M. Moore, M.D., Pauls Valley

P. D. Casper, M.D., Oklahoma City

Mrs. E. S. Kilpatrick, Elk City

Frank Hladky, M.D., Tulsa

J. W. McDoniel, M.D., Chickasha

##### Committee on Immunization

Armond H. Start, M.D., Oklahoma  
City, Chairman

Charles L. Freede, M.D., Oklahoma  
City

Yale E. Parkhurst, M.D., Norman

John C. Kramer, M.D., Tulsa

Mrs. Charles Freede

##### Maternal Mortality Committee

Paul A. Bischoff, M.D., Tulsa, Chair-  
man

Jed E. Goldberg, M.D., Tulsa

James A. Merrill, M.D., Oklahoma  
City

Houston F. Mount, M.D., Tulsa

John W. Shackelford, M.D., Okla-  
homa City

Earl R. Muntz, M.D., Ada

## SECTION I

### INTRODUCTION

The success of a council of our association depends heavily on the efforts of its constituent committees. Your Council on Public Health has been extremely fortunate to have active committees and committee chairmen. The programs conducted by this council have been handled expeditiously and competently. But more important than the way they may have been handled, are the contributions that have been made to the public health of all Oklahomans. This council, through the efforts of its members and especially through the efforts of its committees, has: conducted a statewide conference on alcoholism, has conducted a study of maternal mortality in the state, revised the birth certificate and fetal death reporting form, continued a cooperative study on automobile accidents with the Cornell Crash Institute, waged a massive campaign on immunization, established a committee to study disease screening, studied health care being rendered in the state's penal institutions, has



been involved in smoking and health and sex education.

Obviously we have covered many aspects of public health.

The council chairman takes this opportunity to commend the members of this council and the members of its various committees for the fine manner in which they have completed their charge. Contained herein are the committee reports and their recommendations in which we wholeheartedly concur.

## SECTION II

### SPECIAL COUNCIL ACTIVITIES

#### A. Smoking and Health:

The Oklahoma State Medical Association was one of the original supporters of a statewide Interagency Council on Smoking and Health. Through the efforts of this interagency council, Oklahoma schools have received continuous programs on the hazards of smoking to health. One needs only to visit an elementary classroom to see the results of this program. The physicians of the state have been supplied with a small brochure for distribution through their offices that explains the hazards of smoking. It is hoped that we can continue our attack against smoking and prevent our young people from starting.

To expand the efforts of the interagency council, a grant to finance a five-year program was submitted through the Regional Medical Program. A part of the program was to hire a full-time executive director for the council. RMP's grant requests were cut drastically by HEW and the outcome of the smoking and health grant is not known at this time. The council is hopeful that additional financing will be secured for the smoking and health program and pledges to continue its efforts in this educational endeavor.

#### Recommendation:

In view of the concern of organized medicine regarding the hazards of smoking to health, it is recommended that the House of Delegates review its position of permitting tobacco companies to exhibit at the OSMA annual meeting.

#### B. Cornell Automotive Crash Injury Research Program:

On July 14th, 1963, the Board of Trustees of the Oklahoma State Medical Association endorsed an Automotive Crash Injury Research program sponsored by the Cornell Aeronautical Laboratory, Inc. of Cornell University in cooperation with the Oklahoma State Highway Patrol, the Oklahoma State Department of Health, and the Oklahoma Hospital Association. The "fifth" six-month phase of the program in the State of Oklahoma will begin on June 1st, 1969.

The purpose of this program is to obtain reliable data on the frequency, nature and specific causes of injury to occupants of passenger cars and trucks involved in accidents. Medical data submitted by physicians treating accident victims is matched with information on injury causes and accident data supplied by state patrol officers and is submitted to Cornell in Buffalo, New York, for analysis and statistical tabulation.

We are informed that data already collected from cooperating states have served to guide automobile manufacturers in making important design changes, first introduced in 1956 model passenger cars, specifically engineered to provide protection during accidents. Reliable information being obtained on the degree of protection offered by seat belts, improved door latches, energy-absorbing steering wheels, padding, etc., is most encouraging. There is now a vital need to further evaluate the effects of these safety features in reducing the number of fatalities and the severity of injuries.

In addition, these studies are producing medical statistics which promise to implement treatment of auto crash victims through more definitive knowledge of the nature and scope of the problem. The Trauma Committee of the American College of Surgeons has expressed great enthusiasm for this project.

The council wishes to continue its cooperation with Cornell in acquiring this data.

#### C. Disease Screening Committee:

At the request of the Oklahoma

State Health Department, your council appointed a committee to plan and develop joint programs in multi-phase chronic disease screening. Although the committee has not initiated a program to date, we feel that the representation of private medicine in this type of public health program is important, and visualize in the future important functions for this committee.

#### D. Medical Advisory Committee to the State Board of Corrections:

A special committee is currently studying the medical facilities and medical care being rendered in the state's penal institutions. A report is to be drafted and presented to the State Board of Corrections who requested the study. The committee has already toured the facilities at Stringtown, McAlester and the Women's Prison and will meet on May 18th to consider its final report.

#### E. Sex Education:

The controversy that erupted over sex education in the Oklahoma public school system dictated the necessity for action. Members of the association, members of the legislature and others inquired about medicine's position. Realizing the volatility of the issue, created by strong emotions, the council hesitated to commit this profession to a hastily drawn position.

The following letter was drafted and forwarded to the chairman of the Senate's investigating committee:

April 2nd, 1969

The Honorable Gene Howard,

Chairman

Subcommittee on Public Schools

Oklahoma State Senate

State Capitol Building

Oklahoma City, Oklahoma

Dear Senator Howard:

For the past several months there has been a great deal of discussion and unrest among the citizens of the state about the relative merits of sex education in our public school system. The physicians of Oklahoma recognize that this is a serious and complex problem and made even more so by the high emotions on both sides.

We understand the concern of



many parents about the prospects of inadequate or inappropriate teaching of sex education, but we also realize the problems that may be created by lack of understanding and knowledge of basic facts regarding sex.

Because the practicing physician is oftentimes consulted by parents regarding matters relating to sex, we feel a primary obligation to the citizens of the state to be of service in this matter.

We would, therefore, as the voice of organized medicine in the state of Oklahoma, like to suggest that the Senate postpone any definite action on House Bill 1484 and that the matter of sex education in our public schools be the subject of an interim study. We would be happy to participate with competent members of a heterogeneous group to study in great detail the questions of value of sex education and the method of teaching same in our public schools.

If we can be of any assistance to you, please let us know.

Sincerely,

/s/ Scott Hendren, M.D.,  
President

/s/ Hayden H. Donahue, M.D.,  
Chairman, Council on Public Health

### SECTION III

#### COMMITTEE ON ALCOHOLISM

During the past year the Committee on Alcoholism, in cooperation with the Council on Public Health, planned and executed a statewide conference on alcoholism as recommended by the 1968 OSMA House of Delegates. The conference was held in Oklahoma City, Thursday, February 6th, and attracted nearly 250 people.

The committee worked with the following organizations to promote attendance at the meeting: Alcoholics Anonymous, OSMA Woman's Auxiliary, Safety Council, Council of Churches, Oklahoma Hospital Association, Oklahoma Mental Health Association, Oklahoma Department of Public Safety, Oklahoma Department of Public Welfare, Oklahoma Department of Public Health and the Oklahoma Department of Mental Health. The conference itself was partially underwritten by a grant

from the American Medical Association's Department of Mental Health.

During the year the committee also distributed to all county societies lists of members of Alcoholics Anonymous that were willing to assist local physicians working with alcoholic patients. The names on the lists were not for general publication, and distribution was limited to physicians only.

In late January of this year, the committee received a letter from the AMA urging all state and county medical societies to contact local bar associations regarding the possibility of establishing a joint committee on alcoholism. This recommendation was made after the American Bar Association's House of Delegates passed a resolution urging the bar associations to create committees on alcoholism in their own structures. In addition, the AMA Board of Trustees on June 20th, 1968, adopted a proposed joint statement of principles concerning alcoholism to be issued by the ABA and the AMA. This statement is as follows:

"The American Bar Association and the American Medical Association, recognizing that alcoholism is a major health problem and is an illness due to multiple causes often beyond the control of the individual, now affirm that alcoholics are entitled to the same rights and privileges in law and the same opportunity for medical treatment which are accorded to persons with other illnesses or diseases, and make the following declarations consistent with this affirmation.

"1. Alcoholism should be regarded as an illness in medical and hospital care insurance contracts, and be subject to benefits comparable to those which apply to other chronic illnesses.

"2. General hospitals, both public and private, should accept on a non-discriminatory basis, for both inpatient and outpatient care, patients diagnosed as alcoholics. This principle was approved by the AMA House of Delegates in 1956 and reaffirmed in 1966.

"3. Schools of medicine and hospital training programs should develop courses of instruction in the

prevention, causes, diagnosis and treatment of alcoholism.

"4. State governments should adopt new comprehensive legislation covering the problems of alcoholism and public intoxication. In recognition of recent federal court decisions, such legislation should find that public intoxication in itself is not a crime, and that alcoholism is a chronic illness. It should provide for adequate diagnostic, treatment and rehabilitation services for alcoholics and for civil commitment for treatment rather than prosecution. It also should provide for civil commitment in those cases where the defendant is acquitted of an accusation of a crime on the ground of alcoholism.

"5. State and local bar and medical associations should appoint committees on alcoholism where such committees do not now exist. These committees should meet jointly on a regular basis to consider problems of alcoholism in their geographic areas and recommend appropriate action to the proper authorities of the American Medical Association and the American Bar Association. Activities recommended for the consideration of state and local associations include:

"(a) Encouraging the development of adequate community facilities, both public and private, for the proper treatment of alcoholism. Such facilities should include clinics, detoxication services, hospitals and half-way houses.

"(b) Working with, and helping to finance, other organizations active in public education programs on alcoholism such as affiliates of the National Council on Alcoholism.

"(c) Cooperating with appropriate local authorities in the maintenance and conduct of special educational programs under court auspices such as 'honor classes' or 'schools' for alcoholism prevention, as exemplified by the one existing in San Francisco. The purpose of such programs is to provide pertinent information on the subject of alcoholism to persons involved with the law because of their use of alcohol.

"(d) Providing trial judges with guidelines on diagnosis and treat-



ment of alcoholism, especially judges in courts dealing with domestic relations who frequently find that alcoholism is a predominant or complicating problem in divorce and child custody cases.

"(e) Advocating the adoption of model state legislation relating to the legal rights and medical management of alcoholism."

#### *Recommendations:*

1. It is recommended that the Committee on Alcoholism be continued on an indefinite basis and that it continue the liaison activities exemplified by the above mentioned conference.

2. It is further recommended that the committee concentrate its activities in the following years on promoting meetings between county medical societies and the Alcoholics Anonymous and between county medical societies and county bar associations.

3. It is further recommended that the OSMA House of Delegates adopt the foregoing joint statement of principles as a working statement of guidelines for joint OSMA-Oklahoma Bar Association activities.

#### *SECTION IV*

##### *COMMITTEE ON IMMUNIZATION*

The Committee on Immunization has cooperated with the Oklahoma State Health Department in a statewide campaign for immunizations against preventable diseases. The efforts of the two organizations were two-pronged: The Health Department concentrated on *public awareness* and the committee on *physician awareness*.

After both organizations had approved an immunization schedule (attached hereto), the schedule was mailed to all physicians, health nurses and local health officers in the state.

The Immunization Committee contacted every county society for speaking engagements and members of the committee have visited with 34 of the state's 46 societies and traveled over 4,390 miles telling the immunization story.

March was proclaimed "Immunization Month" by Governor Bartlett

and pictures of the proclamation signing and appropriate articles were distributed to the state's daily and weekly newspapers.

The committee in conjunction with the editorial board of the Oklahoma State Medical Journal published scientific papers regarding immunization in the March issue of the *Journal*. The March health columns distributed to 244 state newspapers were on immunization and preventable diseases, and special space was provided in the OSMA newsletter for promotion of the campaign.

The Health Department's "public awareness" campaign included TV interviews, radio spots, news releases and highway billboards. "Emmy Immunity" was joined by brother "Lemmy" in an unrelentless fight against the dirty disease gang.

Results of the campaign cannot be easily assessed. However, it is felt that the immunization levels of most of our counties are higher than in any previous year. The incidence of disease is lower and the number of vaccines distributed by the State Health Department is higher. The chart below shows dramatically what an effective immunization program will do to the incidence of disease. In 1967 there were 3,363 cases of measles in the state; in 1968 after a concentrated campaign there were only 154 cases. A less dramatic example but by far more important is the incidence of polio in 1959 with 167 cases compared to 1968 with only one.

There is no accurate information on immunization levels in our counties prior to 1967. However, in the 1967-68 school year, the Health Department survey indicates that immunization levels of specific diseases

were gratifyingly high. (Selected counties are indicated below. Immunization levels are for first grade students.)

Woodward County	Measles	87%
Tulsa County	Measles	99%
Atoka County	Measles	78%
Oklahoma County	Measles	99%
Custer County	Measles	96%

NOTE: An overview of the immunization status of Oklahoma is included in the March issue of the *OSMA Journal*.

Legislation introduced in the current session of the legislature would have required that students entering Oklahoma's elementary schools for the first time would have to show to school authorities that they had either been properly immunized or medical history indicated no need for immunization. The bill provided that a physician was to administer the vaccines and could have exempted the child if he felt it was necessary. It also exempted a religious group who felt no need for immunization.

Your committee testified on two occasions and worked hard in support of this legislation. However, after passing the House and the Senate Public Health Committee, it was laid over on the Senate calendar for next session.

#### *Recommendations:*

The committee recommends that the Oklahoma State Medical Association continue its cooperative efforts with the State Health Department in an annual immunization campaign.

#### *SECTION V*

##### *BIRTH CERTIFICATE COMMITTEE*

To conform with action taken at the House of Delegates meeting in

CASES REPORTED TO OKLAHOMA STATE HEALTH DEPARTMENT  
1959-1968

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Polio	167	18	5	33	2	3	2	1	1	1
Diphtheria	34	25	9	8	18	1	1	3	1	—
Whooping Cough	139	103	16	24	54	34	56	17	86	52
Tetanus	4	7	5	4	8	4	4	3	4	—
Measles*	—	—	—	—	—	—	—	—	3363	154

\*Accurate case reporting of measles was not accomplished until 1967. Measles vaccine was first distributed by the Oklahoma State Health Department during 1966.



May, 1968, the State Medical Association recommended to the State Health Department that the existing birth certificate form be altered. The alterations were made and new forms and a letter from the State Medical Association were mailed to all Oklahoma physicians advising them of the necessity for the additional information, as well as the physician's legal position when completing the forms.

According to the statistician at the State Health Department, the new form is being completed by the majority of physicians and there seems to be no apparent difficulty.

#### SECTION VI MATERNAL MORTALITY COMMITTEE

The Maternal Mortality Committee, as directed by the recommendations accepted by the House of Delegates at its meeting in May, 1968, is attempting to assist in establishing blood storage facilities in those general hospitals which do not maintain a blood supply.

Reports secured by the committee for the decade from 1957 to 1967 indicate that annually 5.4 maternal deaths occur in Oklahoma due to hemorrhage. It is the feeling of the committee that many of these deaths could be prevented if adequate blood supplies were available at our general hospitals.

To encourage the procurement of those facilities, your committee has embarked upon a cooperative effort with the Oklahoma Health Department, the Oklahoma Hospital Association and the Oklahoma Health Planning Agency. As is common in such a cooperative effort, progress is oftentimes slow.

The Health Department has accepted the responsibility of administering the program and is currently conducting a survey of storage facilities available in the state. Inasmuch as the need for blood service goes beyond maternal and perinatal care, the Health Department has enlarged the study to include the minimum standards acceptable for general hospitals in the provision of whole blood for emergencies. The primary information has been received; however, the data have not

been compiled into a complete report.

The Comprehensive Health Planning Agency has agreed to assist in drafting the grant request for matching funds. However, the request cannot be made until the final study information has been tabulated. Plans are to request monies for the 1970 fiscal year.

The Oklahoma Hospital Association and the American Red Cross are both working with the committee in an effort to solve this problem, and hopefully a plan can be enacted in the near future.

#### *Recommendation:*

The Maternal Mortality Committee requests that the House of Delegates approve its efforts to improve the blood storage facilities in the state of Oklahoma and to continue this committee as outlined in its report to the House of Delegates in May, 1968.

#### OKLAHOMA

##### STATE HEALTH DEPARTMENT *Schedule for Active Immunizations and Tuberculin Test for Normal Infants, Children, and Adults\**

##### DIPHTHERIA, PERTUSSIS, TET- ANUS (DPT) — DIPHTHERIA, TETANUS (dT)

###### A. Primary Immunization

1. Approximately 6 weeks through 6 years  
3 intramuscular injections of DPT at 4-6 week or more intervals with a reinforcing dose 1 year or more after 3rd injection.
2. Adults and children over 6 years  
2 intramuscular injections of dT at 4-6 week or more intervals with a reinforcing dose 1 year or more after 2nd injection.

###### B. Booster Immunization

1. 3 years through 6 years  
Single intramuscular dose of DPT preferably at time of school entrance.
2. Adults and children over 6 years  
Single intramuscular dose of dT every 10 years, calculated from date of last dose of booster or date of injury prophylaxis.
3. Injury prophylaxis with dT if date of last booster over one year.

#### MEASLES

##### A. Primary Immunization

1. 12 months and older
  - a. Single dose of further attenuated measles vaccine (Schwarz) is recommended.
  - b. Measles vaccine (Edmonston) with immune globulin is also acceptable and the only preparation available at the Oklahoma State Health Department.

##### B. Booster Immunization

Not recommended.

#### POLIO

##### A. Primary Immunization

1. 6 weeks through 1 year  
3 oral doses of Trivalent OPV. Two doses 8 weeks or more apart and the third 8-12 months or more after the second.
2. 1 year through 18 years  
3 oral doses of Trivalent OPV. Two doses 8 weeks or more apart and the third 8-12 months or more after the second.

##### B. Booster Immunization

1. School entrance  
On entering elementary school, all children who completed a primary OPV series should be given a single follow-up dose of Trivalent OPV.
2. Routine boosters not recommended.

#### SMALLPOX

##### A. Contraindications

1. Insect bites, eczema, rashes, etc.

##### B. Primary Vaccination

1. Between 1st and 2nd birthday preferable or at any age thereafter for unvaccinated persons.

##### C. Revaccination

1. On entering elementary school.
2. At 3 year intervals for medical personnel, hospital personnel, public health personnel, and allied profession. For foreign travel.
3. At 10 year intervals for all others.

TYPHOID — Not recommended for routine use.

#### TUBERCULIN TESTING

##### A. Primary

- 9-11 months of age

##### B. Re-test

- 6 years and 12 years as indicated



according to possibility of exposure.

\*Based on recommendations of USPHS and the American Academy of Pediatrics.

\*Approved by the Oklahoma State Medical Association and the Oklahoma State Osteopathic Association. September, 1968

Report of the  
COUNCIL ON INSURANCE  
(APPROVED)

*Council Members*

C. E. Woodard, M.D., Tulsa, Chairman  
Jack P. Myers, M.D., Okmulgee  
Jack D. Fetzer, M.D., Woodward  
Paul H. Rempel, M.D., Enid  
C. Alton Brown, M.D., Oklahoma City  
Maurice C. Gephardt, M.D., Muskogee  
Robert W. Kahn, M.D., Oklahoma City  
C. S. Lewis, M.D., Tulsa  
L. J. Bernard, M.D., Oklahoma City  
Frank R. Michener, M.D., Lawton  
Walter H. Gary, M.D., Tulsa

SECTION I

**DISABILITY INCOME PROGRAM**

The disability income program is underwritten by the Insurance Company of North America and is administered by the C. L. Frates and Company agency, Oklahoma City.

There are 745 physicians insured under the program. Since 1961, premiums received total \$1,148,224.41 and paid claims and loss reserves amount to \$790,529.73, developing an overall loss ratio of 68.8 percent.

INA's benefit structure is comparable to the best on the market, and is priced materially below competitive plans which offer the same broad scope of benefits.

The program allows a physician to select from a number of waiting periods for the commencement of benefits following disability due to illness, and he may also choose indemnity benefits ranging from \$200 to \$800 per month. Another option permits the insured to choose the length of time he wishes for the payment of benefits for sickness disability . . . three years, five years, or to age 65. Benefits are payable for life on

cases involving accidents. An optional feature provides \$15 per day hospitalization benefits for 120 days at the nominal premium surcharge of \$18 per year.

The Council on Insurance has agreed to review questionable claims, although this has not presented a problem of any significant nature to date.

OSMA's program has an eight-year record of stability, unique for programs of this type. There have been no rate changes, and benefits have been increased.

SECTION II

**OVERHEAD EXPENSE PROGRAM**

The association's overhead expense program is underwritten by the Continental Casualty Insurance Company through the C. L. Frates Company.

This program indemnifies physicians against the costs of keeping their offices open during periods of disability. The premiums are tax deductible as a business expense. Currently, there are 163 physicians participating.

The loss ratio has been exceptionally favorable (25.9 percent) to the extent that a 20 percent reduction in premium was effected on February 1st, 1969, and the monthly coverage available was increased from \$1,000 to \$1,500.

SECTION III

**PROFESSIONAL LIABILITY PROGRAM**

The association has one of the outstanding professional liability programs available in the United States.

At a time when other state medical associations are finding it difficult to obtain coverage, or are suffering substantial rate increases, the OSMA program is declaring a 10 percent dividend based on favorable loss experience during 1968.

The program is underwritten by the Pacific Employers Indemnity Company, a subsidiary of the giant Insurance Company of North America. Coverage is available through any INA agent. The administrator is the C. L. Frates agency.

At present, there are 890 state physicians enrolled in the program. Paid losses since changing to PEIC on January 1st, 1967 have been negligible. The current loss ratio (paid

claims and reserves) amounts to only 14.5 percent.

An agreement between the association and INA offers many protections to the insureds, as well as the unique dividend feature. Basic rates for the OSMA program, notwithstanding the dividend feature, are well below the standard rate for comparable coverage in Oklahoma.

In order to maintain our favorable loss picture, an intensive claims prevention program will be carried out during the next year. This will begin with the release of a new booklet prepared by OSMA staff and printed at INA expense. Copies of the booklet will be made available during the 1969 OSMA annual meeting. It is recommended reading for all physicians, and should be permanently retained as a reference manual.

Beginning in September of 1969, an effort will be made to arrange appearances before the majority of county medical societies. Speakers will be members of the Council on Insurance, representatives of the insurance company, and attorneys who serve as defense counsel under the program. Other efforts to reduce the incidence of claims will include regular medical-legal information to appear in OSMA publications, and perhaps a statewide conference or regional conference on the subject. Improved relations between physicians and attorneys will also be stressed.

The Council on Insurance plans to work with the OSMA Legislative Committee to study the feasibility of preparing legislation to relieve physicians from unwarranted legal situations involving professional liability, particularly as it applies to the statute of limitations.

SECTION IV

**XIC PROGRAM**

Because of changing public attitudes and expectations in the light of dramatic publicity regarding medical achievements, not to mention the growing emotional bias of juries, catastrophic judgments in the professional liability field are becoming commonplace. Oklahoma has been fortunate to date that there



have been no awards in the \$500,000 to \$1,000,000 bracket.

However, the prospect of excessive malpractice awards is a reality which every physician must consider in selecting the limits of his insurance protection.

During the past year or so, approximately 200 state doctors have elected to purchase "excess limits" policies to protect themselves against catastrophic contingencies.

Therefore, in order to gain a dividend-type policy for those physicians who desire excess limits protection, the Council on Insurance has made an arrangement with the Pacific Employers Indemnity Company to make available its XIC policy under a dividend arrangement (up to a 15 percent premium dividend based upon favorable loss experience.)

This coverage requires basic malpractice protection of \$100,000/\$300,000 (available through the OSMA-PEIC program mentioned in Section III of this report), after which the XIC program will carry the limits of protection to as high as \$1,000,000. The XIC plan also provides excess limits protection on homeowners, automobile, farmers personal liability, watercraft, aircraft, etc. (subject to having required basic liability protection for each peril). The coverage also provides excess limits protection for certain uninsured perils.

Your Council on Insurance recommends the PEIC excess limits policy, although this endorsement does not require an OSMA member to enroll in XIC as a condition of purchasing the basic malpractice program. A member of the OSMA may still purchase high limits of professional liability coverage if he chooses.

#### SECTION V

##### GROUP TERM LIFE

The life insurance program, presently carried by about 400 OSMA members, is underwritten by the Massachusetts Mutual Life Insurance Company through the Wilson and Wilson Insurance Agency, Oklahoma City.

The program provides for a standard annual premium of \$150.00 which purchases an amount of term life insurance based upon the insured's age. Also included in the rate is an

equal amount of accidental death benefit, common carrier coverage (triple indemnity), waiver of premium, dismemberment and loss of sight coverage. Full aviation protection is provided for private pilots at no extra cost.

At the youngest age schedule, the death benefit is \$33,125, and from this point on the benefit decreases gradually with each additional year of age. However, the physician may convert the amount of the decrease each year to an ordinary life policy without evidence of insurability. Thus, the program provides high death benefits at the younger ages and also insures "insurability."

Death claims during the past year, six in total, amounted to \$33,375. Premiums for the past year were \$56,567, resulting in a profit for the year.

However, no premium dividends are being declared because of prior accumulated deficits. Since the inception of the plan in March, 1956, total premiums have been \$839,307, but the company has paid death claims amounting to an accumulated loss of \$112,936.

The program appears to be stabilizing, but to assure its success it is imperative that new participating members be continually added. Enrollment information may be obtained from either the OSMA or the administrator, Walter C. Wilson, C.L.U.

##### Resolution No. 1

INTRODUCED BY: Pontotoc County Medical Society

SUBJECT: Optional AMA Membership

REFERRED TO: Reference Committee No. I.

(APPROVED AS AMENDED)

WHEREAS, the physicians of Oklahoma have not been asked to express their opinion regarding compulsory AMA membership since 1963;

NOW, THEREFORE, BE IT RESOLVED, that the Executive Committee of the OSMA solicit pro and con statements of equal length, one from a delegate to the AMA and one from the author of Resolution No. 1, and that these be mailed to all OSMA members with a covering letter and

with a reply card ballot as to their desire to continue or discontinue mandatory membership in the AMA.

FURTHER BE IT RESOLVED, that the correspondence be mailed prior to August 1st, 1969, and the results, as tabulated by the Executive Committee, be announced in association publications prior to October 1st, 1969.

BE IT FURTHER RESOLVED, that the findings of the survey be made available for the formal consideration of the OSMA House of Delegates.

##### Resolution No. 2

(APPROVED)

INTRODUCED BY: Kingfisher County Medical Society

SUBJECT: Administrative Demands of Government

REFERRED TO: Reference Committee No. III.

WHEREAS, the Secretary of Health, Education and Welfare, and officials of the American Medical Association have urged all physicians to hold down medical costs and eliminate inefficiencies; and

WHEREAS, the recent increases in practice overhead result principally from the need for clerical processing of a variety of voluminous forms and non-medical data en route to various agencies and government bureaus; and

WHEREAS, the legal responsibility for such documentation resides in the various bureaus and agencies, and in the interests of efficiency ought to be compiled and processed by the interested bureau or agency rather than by the treating physician;

THEREFORE, BE IT RESOLVED, by the Oklahoma State Medical Association that the moral and ethical responsibilities of the practicing physician in proffering fees to his patient may be properly fulfilled by the rendering of an itemized statement on the physician's usual billhead stationery; and

BE IT FURTHER RESOLVED, that any additional reports and data not required by law should be separately contracted by mutual agreement between the patient and physician.



**Resolution No. 3**

INTRODUCED BY: Tulsa County Medical Society

SUBJECT: Treatment of Minors With Venereal Disease

REFERRED TO: Reference Committee No. IV.

(APPROVED AS AMENDED)

WHEREAS, the authority for physicians to treat a minor child with venereal disease in the State of Oklahoma rests only on an interpretation of the Oklahoma laws: 63 O.S. 1941, pp. 541 to 542-11; and

WHEREAS, this interpretation was handed down by the first Assistant Attorney General, Mr. Fred Hansen, on October 22nd, 1949; and

WHEREAS, there is no specific enabling legislation for such treatment; and

WHEREAS, this existing interpretation allows a physician to treat such minors without the knowledge of its parents or guardian; and

WHEREAS, according to the Oklahoma Communicable Disease Bulletin, Volume 69, No. 5, "The gonorrhea problem in Oklahoma is increasing yearly with 5,372 cases reported from all sources during fiscal year 1968, an increase of over 18% in two years (1966-68)"; and

WHEREAS, it is the recommendation of the House of Delegates of the American Medical Association that all states enact laws which permit physicians to treat minors with venereal disease; and

WHEREAS, 37 states of the 50 United States have such laws; and

WHEREAS, Oklahoma Statutes do not specifically empower a physician to treat a minor without permission of the guardian or parents;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association recommend that the Oklahoma State Legislature enact appropriate amendments to the Public Health Code that would make it lawful for a physician to examine and/or treat a minor with suspected venereal disease without parental consent or notification.

**Resolution No. 4**

INTRODUCED BY: OSMA State

Legislative Committee

SUBJECT: Rural Medical Scholarship Program

REFERRED TO: Reference Committee No. IV.

(APPROVED)

WHEREAS, there is a growing concern about the availability of medical services in Oklahoma's rural communities; and

WHEREAS, in the past decade there was a net loss of 84 physicians in Oklahoma cities with a population of less than 10,000; and

WHEREAS, the Oklahoma State Medical Association feels a responsibility to the citizens of Oklahoma for the providing of adequate health care;

NOW, THEREFORE, BE IT RESOLVED, that the President of the Oklahoma State Medical Association be directed to appoint a committee to study a "Rural Medical Scholarship Program."

**Resolution No. 5**

(Late Resolution)

(APPROVED AS AMENDED)

INTRODUCED BY: Walter E. Brown, M.D., Chairman Advisory Committee on Medical Care for Public Assistance Recipients  
Don H. O'Donoghue, M.D., Chairman Advisory Committee on Medical Care for Crippled Children

SUBJECT: Preservation of Medicaid System

REFERRED TO: Reference Committee No. III

WHEREAS, the medical care program as administered by the Oklahoma Department of Public Welfare has provided care to recipients offering them free choice of physician and facility; and

WHEREAS, the communication and relationship between the Department of Public Welfare and the professional associations and provider associations have functioned well;

THEREFORE, BE IT RESOLVED, that the Department continue to pay for medical care of recipients of public assistance and medical assistance through the private sector and to continue to make payments under both Titles XVIII and XIX in the same amounts as determined

under the usual, customary and reasonable method of payment.

**Resolution No. 6**

INTRODUCED BY: Donald W. Bobek, M.D.

SUBJECT: Amendment of the Bylaws of the Oklahoma State Medical Association to Remove the Requirement for Compulsory Membership in the American Medical Association

REFERRED TO: Reference Committee No. I

(DISAPPROVED)

WHEREAS, the Bylaws of the Oklahoma State Medical Association require all OSMA members to be dues-paying members of the American Medical Association, except where specifically exempted; and

WHEREAS, only 15 state medical associations, including the Oklahoma State Medical Association, require membership in the AMA as a condition of local membership; and

WHEREAS, an increasing number of OSMA members believe the steady rise in AMA membership dues has not been accompanied by corresponding increases in benefits; and

WHEREAS, each member of the Oklahoma State Medical Association should have the privilege of determining for himself whether or not he wishes to participate as a member of the American Medical Association;

NOW, THEREFORE, BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association approve the following amendments to the OSMA Bylaws at the 1969 Annual Meeting in Tulsa, May 15th-17th:

*Amendment No. 1*

Chapter I, Section 1.00 (MEMBERSHIP, BASIC REQUIREMENTS) shall be amended by substituting the following sentence for the last sentence in the present Section: *Members of the component societies and of this association shall have the opportunity of becoming members of the American Medical Association, but are not required to belong to the American Medical Association.*

*Amendment No. 2*

Chapter II, Section 2.00 (DUES,



AMERICAN MEDICAL ASSOCIATION DUES) shall be amended to read as follows: *Section 2.00. AMERICAN MEDICAL ASSOCIATION. Members of this association who elect to become members of the American Medical Association shall pay AMA dues and assessments as levied for the appropriate classification of membership. AMA dues and assessments for such members shall be collected and remitted by component societies in like manner as state association dues and assessments.*

**Resolution No. 7**

*(RECEIVED FOR STUDY AND REFERRED TO THE AMA)*

INTRODUCED BY: Leon D. Combs, M.D. and Francis A. Davis, M.D.

SUBJECT: Federal Medical Evaluations Board

REFERRED TO: Reference Committee No. III

WHEREAS, a bill has been introduced in Congress by Congressman Wyatt and Senator Hatfield (HR 10054 and S 1801) to establish the Federal Medical Evaluations Board to carry out the functions, powers and duties of the Secretary of Health, Education and Welfare relating to the regulation of biological products, medical devices and drugs, and for other purposes; and

WHEREAS, the bill would provide

a Federal Medical Evaluations Board whose 15 members are to be appointed by the President. Each member will be an individual with outstanding credentials. These members will be chosen so as to be broadly representative to the total biochemical community. The bill provides for the creation of the following units to assist the Medical Evaluations Board:

(1) *Advisory Evaluation Panels:* These panels will be called on an *ad hoc* basis whenever the Board feels that additional biomedical expertise is needed before it makes its decision on a particular application. Membership in the panel will be selected from a slate of experts in the specific field applicable to the drug application under consideration. Panel members will be compensated on a per diem basis.

(2) *Advisory Appeals Boards:* The bill provides that if an applicant appeals from an Evaluation Board decision, the Board must convene an Advisory Appeals Board to review the Evaluation Board's decision in light of all the clinical data currently available on the application. After its review is completed, the Appeals Board will render an *advisory* opinion to the Evaluation Board recommending either that the latter revise its previous opinion, or that no further action be taken.

(3) The bill further provides for a full-time Secretariat, an Executive

Director, and a Medical Evaluations Staff to assist the Evaluations Board, as the latter will meet only once a month and only its Chairman and Vice-President will be employed on a full-time basis; and

WHEREAS, in 1968 the FDA approved only eighty-seven (87) new products, and only eleven (11) were new entities or discoveries, while, for example, Britain approved nearly ten (10) times this number of drugs. The FDA spent over 13 million dollars in the drug monitoring program, while Britain spent only \$200,000; and

WHEREAS, it is evident that if the American people are to have quality medicine the procedure for approving new drugs must be changed;

NOW, THEREFORE, BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association approve the intent of this bill; and

BE IT FURTHER RESOLVED, that the Oklahoma State Medical Association take all action necessary to inform the people of Oklahoma of the intent of this bill, and bring about a favorable response by Congress; and

BE IT FURTHER RESOLVED, that a copy of this resolution be forwarded to the House of Delegates of the American Medical Association.

**MARK YOUR CALENDAR NOW!**

**64th ANNUAL MEETING of the**

**OKLAHOMA STATE MEDICAL ASSOCIATION**

**MAY 14th-17th, 1970**

**SKIRVIN HOTEL CONVENTION CENTER      OKLAHOMA CITY**



“I’m sick  
of spinning”



Osborn



The
**JOURNAL**

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## *Whose Battle? Whose Victory?*

NO GREAT reasoning power or intellect is required to see that the medical profession is under attack. Spearheaded by politically ambitious bureaucrats the attack is being joined by large segments of the general population eager to satisfy diverse motives. Interminable debate could neither identify all the propelling forces nor resolve the conflict. Grave and dreary predictions emanate from all sides of the vaguely drawn lines of battle. A desperate need for unity finds only dissension. An obvious need for cooperation and compromise is met with hostility and name-calling. Faced with issues of cataclysmic portent for our profession and our nation, we are engaged in a sandbox fight . . . hurt, angry and bewildered.

Wounded as we may feel, most of us know that our patients and our public will suffer the greatest casualties if we fail to reach a rational, just and effective armistice. The only victory is the one which will deliver the best possible medical care to the greatest number of people with the greatest possible efficiency in time, money and facilities. Viewed in this light, victory is nowhere in sight and the conflict rages on; leaderless masses with forgotten goals.

As spokesmen for the medical profession and prime targets in the battle we, the practicing physicians, should and can do something to insure a proper victory. First, we can lend our individual and collective support to efforts to identify those among us who are, in fact, committing unethical, even criminal acts through participation in medical-care, cost-reimbursement programs. Once identified, all such persons whether physicians, paramedical specialists or administrators should be denied the privileges of professional association and society membership. Then and only then can we defend the integrity of our purpose.

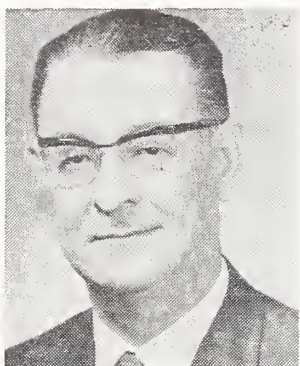
Next, we must abandon the luxurious dream of a fair and friendly press. Narratives about hard work and altruistic effort make dull reading and dull reading doesn't sell newspapers and magazines. We must develop and maintain our own system of communication with those whose interest we represent . . . our patients. We have the facilities and the opportunities to present to them detailed, documented facts, in printed form and by word of mouth. We need not and should not rely upon a capricious press to inform our patients or to hold unchallenged sway over their opinions.

Once developed, a system for the dissemination of facts must continuously and honestly present facts. Therefore, we must assume the responsibility for fact finding in every area of activity primarily devoted to the provision of health care and services.

Our patients need to know the administrative costs involved in all health insurance programs, what premium-dollar returns they can expect and the comparative costs of government-sponsored versus patient-sponsored programs. They need to know how their health is influenced by decisions reached by their physicians, the pharmaceutical industry and the F.D.A. Our patients need to be informed about medical ethics and professional liability and how these considerations influence the quality and cost of their care. They need to be acquainted with the educational process involved in professional training programs. They need to share an understanding of what it is like to study, live and work in the field of medical service.

Leadership, initiative and ingenuity have never been more desperately needed in our profession. Pioneers with missionary zeal must be assigned to this task . . . the education of those who are to become the victors or the vanquished in this battle, our patients? Your help is needed in their defense and this need is critical.—M.R.J. □





The concept of payment of physicians' services on the basis of usual, customary, and reasonable fees is now a national fact.

In order that third party payers, be they public or private, may plan for and pay physicians in accordance with this concept, it is mandatory that organized medicine provide methods for them to appeal inequities otherwise uncontrolled. Further, members of organized medicine need a mechanism through which they can present their complaints against the carriers. This we have called peer review, and the Oklahoma State Medical Association has stood in the forefront with its capable and effective Insurance Review Committee.

Remember, these dedicated and respected physicians representing all disciplines and geographic areas of our state volunteer their

time, talent and judgment which is absolutely necessary to make this new payment plan work.

The other absolute necessity for successful peer review function is for the third party payers to do thorough staff work and documentation for committee presentation and then to respect the recommendation of the Insurance Review Committee insofar as the law permits. Likewise, the physician must also respect the judgment of his peers.

Elsewhere in this issue of *The Journal* is described the planned reorganization of our peer review, hopefully to expedite this essential committee's work. It is obvious that the importance and the scope of this committee, under the chairmanship of Mark Holcomb, M.D., will increase. I know that I speak for all physicians in expressing our respect, our trust and our gratitude for the unselfish service they render in behalf of quality medical service to all our citizens regardless of their social, economic or political status. □

Sincerely yours,

*Harold E. Denyer*



## Parathyroid Adenoma

JOHN G. CAMPBELL, M.D.  
JOHN A. SCHILLING, M.D.

*Aching bones, abdominal moans, and renal stones for twenty years herald hyperparathyroidism due to a single adenoma. This case, the literature, and our therapy are discussed.*

SINCE FELIX MANDL<sup>14</sup> first described a surgically corrected case of parathyroid adenoma, there have been many discovered, removed, and reported. This case is a classic example presented to call attention to the disease which, as has often been demonstrated, appears much more frequently when it is actively sought.

This 44-year-old Caucasian male packing house worker was admitted to University Hospital in May of 1968, complaining of burning on urination of two months' duration. His history revealed left ureterolithotomies, in 1949 and 1955, for hydronephrosis and recurrent calculi. A left nephrectomy was performed in 1957 for a staghorn calculus. In 1962 he underwent a right ureterolithotomy and had a blood pressure of 170/90, blood urea nitrogen of 41 mg/dl, a

serum calcium of 13.0 mg/dl, and serum phosphorus of 1.9 mg/dl. Recurrent stones in 1963 and 1964 led to two more right ureterolithotomies. In August, 1963 his blood urea nitrogen was 15 mg/dl. In September, 1963 it had risen to 44 mg/dl, his serum calcium was 12.6 mg/dl, serum phosphorus 0.7 mg/dl, the alkaline phosphatase was 4.3 (normal 1.5 to 4.0) Bodanski units, and total serum protein measured 7.2 mg/dl. A note in his record at another hospital revealed that the diagnosis of parathyroid adenoma was suspected, and a low calcium diet reduced the serum calcium level to 8.0 mg/dl. In 1964 a right ureterolithotomy was again performed.

This patient continued to work and passed renal calculi intermittently. In April, 1968 he was found to have a blood urea nitrogen of 33 mg/dl, serum calcium of 13.2 mg/dl, serum phosphorus of 2.5 mg/dl, alkaline phosphatase of 8.2 (normal 0.8 to 2.9) Bessey-Lowry units. Two weeks before he was seen at University Hospital he spontaneously passed another stone. Because of the elevated serum calcium level and the serum alkaline phosphatase with depression of the serum phosphorus, he was referred for evaluation.

On admission he complained of frequency of urination, nocturia every one to two hours, burning without straining or any narrowing of the urinary stream, ankle

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swelling, periorbital edema, chronic constipation, and occasional headaches. Accompanying reports noted plus-2 albuminuria, calcification overlying the right renal outline, and no relief from the "sulfa" drugs he had been taking. He denied lethargy, tremors, symptoms of pancreatic or peptic ulcer disease, heat intolerance, excessive milk, alkali, or vitamin D ingestion. Multiple arthralgias without inflammatory arthritis were admitted. He related that one stone had been analyzed as calcium phosphate.

There was no family history of renal stones or endocrine disorders. No radiographic evidence of bony metastasis, multiple myeloma, or sarcoidosis had been demonstrated. In 1956 he fractured his wrist traumatically, but healing was normal.

On examination his blood pressure was 138/90, pulse was 76 per minute and regular, temperature 98.4°. He stood 171 cm. tall and weighed 73.9 kg. (163 lbs.). This well nourished male was alert although slow in movement and response. Periorbital edema was present but no other ocular abnormality or band keratopathy was detected. Dental caries were present. The thyroid gland was not palpably enlarged, nor were any nodules detected. Auscultation of the chest was normal. Previous surgical scars were noted to be well healed and were the only significant abdominal findings. Mild ankle edema was present and early clubbing

was noted in the left fifth finger. No hyperextensibility of the joints could be demonstrated. The prostate gland was estimated to weigh 25 to 30 gm. and lacked nodularity.

The laboratory values are summarized in Table 1. Significantly, the serum calcium was always elevated, rose dangerously immediately prior to operative intervention, and diminished into a normal range rapidly after surgery. Postoperatively, no values were ever obtained less than 8.0 mg/dl. The serum phosphorus continued to decline to 1.8 mg/dl one week after surgery but returned to 2.8 mg/dl before discharge from the hospital. Transient uremia responded. The serum chloride, thought by some to point to a parathyroid adenoma when elevated, was and remained above normal. The postoperative metabolic acidosis was corrected by oral agents. Bone involvement was indicated by the constantly high serum alkaline phosphatase levels. The electrocardiogram revealed left ventricular hypertrophy and sinus tachycardia. The Q-T interval was 0.34 sec. Serum amylase was 191 units. Fasting blood sugar was 87 mg/dl. Total serum protein level was 6.7 (3.6/3.1 = albumin/globulin ratio). The serum protein electrophoresis eliminated the diagnosis of multiple myeloma. The white blood count was 10,300 on admission; hemoglobin was 15.2 gm/dl; hematocrit was 46%. Urinalysis revealed five to ten red blood cells and 50 to 60 white blood cells per high power field. Specific gravity was 1.006 and there was plus-1 al-

Table 1.  
LABORATORY DATA

Hospital Day		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Serum Calcium (mEq/L)	8 A.M.	14.0	15.0	16.2	16.4	15.8	18.6	17.4		11.4	9.2	8.4	8.2	8.0	8.6	8.0	8.0	9.4	9.0
	Noon								15.0	10.0									
	4 P.M.									9.2	8.8	8.0							
	8 P.M.								12.8	9.0									
	M/N									8.6									
Serum Phosphorus (mg/dl)		3.5	3.4	3.0	2.6	2.3				2.4					2.1	1.8			2.8
BUN (mg/dl)		26			34	36	40	40		59	70	71	70	51	40	33	30	32	26
Serum CO <sub>2</sub> (mEq/L)		17			16	18		19		16	11	13	13	17	17	17		17	
Serum Chloride (mEq/L)		108			108	108		108		103	103	106	111	114	118	112		109	
Serum Potassium (mEq/L)		5.1			5.2	5.5		5.3		5.4	5.5	5.4	4.8	4.6	4.9	5.2		5.6	
Serum Sodium (mEq/L)		134			129	135		135		130	127	132	135	135	132	144		138	
Uric Acid (mg/dl)			7.0		7.0										10.4		8.2		7.5
Alkaline Phosphatase (K-A units)		116								136	125				105		120		122
Serum Creatinine (mg/dl)		1.7										3.8			3.4				

Day of Operative Procedure



buminuria. There was no Bence-Jones protein in the urine. Culture of the urine revealed *Pseudomonas aeruginosa*, *Klebsiella* species, *Mima polymorpha*, and *Proteus mirabilis*. All but *Mima* were sensitive to Cephalothin. Serum magnesium, drawn on the first postoperative day, was 1.69 (normal). Urinary calcium loss was calculated at 6.16 gm/24 hours. Creatinine clearance was 11.5 ml/min. preoperatively.

Radiographic examination of the chest revealed bilateral old rib fractures. Multiple calcific densities overlying the right renal outline were noted on a plain film of the abdomen. Oblique views of the hands revealed rather classic subperiosteal bone reabsorption of the middle phalanges and marked reabsorption of the distal tufts (figure 1). Skeletal survey revealed absence of the lamina dura of the teeth, granular appearance of the demineralized skull, considerable demineralization of the articular surfaces of both acromioclavicular joints, most marked in the distal end of the clavicle. No compression fractures of the vertebrae were noted. Intravenous pyelography revealed slow visualization, nephrolithiasis, and nephrocalcinosis.

Feeling that the patient had all the classic criteria for parathyroid hyperplasia or adenoma, we undertook a neck exploration on 14 May 1968. Under Penthrane endotracheal anesthesia, a low thyroid collar incision revealed a symmetrical, slightly enlarged thyroid gland with no nodules. Vascularity was notably increased around the right lateral aspect of the thyroid gland with enlargement of the right inferior thyroid artery. Posteriolateral to the right lower pole of the thyroid an oval, smooth, vascular, gray-tan mass, measuring 2.5 cm. by 1.5 cm., was sharply dissected from the thyroid gland. Visual examination of three small, yellow, atrophic parathyroid glands was then accomplished. Frozen section and permanent slide studies revealed the enlarged mass to be a parathyroid adenoma weighing 3.8 grams.

Postoperatively, the patient never experienced or demonstrated any signs of tetany, viz., Chvostek's or Trousseau's signs, paresthesias, or muscle spasms. Approximately 26 hours after surgery, with a serum calcium of 9.0 mg/dl, prophylactic

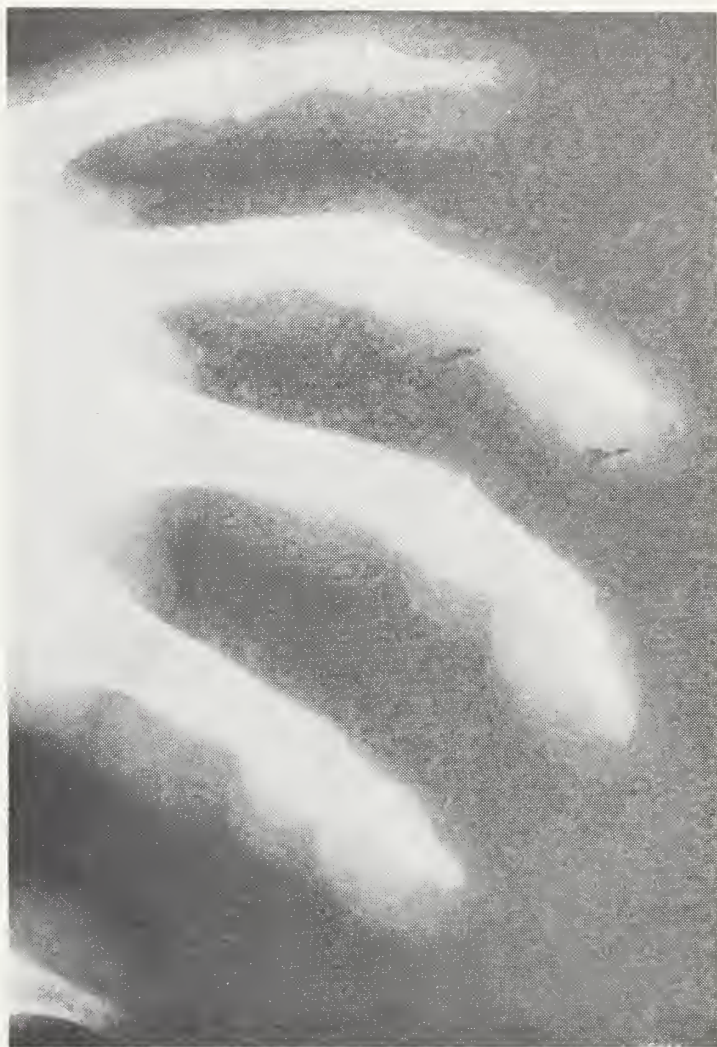


Figure 1. Radiographic examination of the hand demonstrating classical subperiosteal reabsorption of bone of the middle phalanges and of the distal phalangeal tufts.

intravenous calcium gluconate therapy was initiated. Oral calcium lactate was used when oral feeding was tolerated. From the second to the eighth postoperative day he received vitamin D, 50,000 units daily. On discharge his well being was moderately improved, and his daily calcium intake was supplemented by two grams calcium in tablet form.

#### DISCUSSION AND CLINICAL REVIEW

The necessary suspicion to delve into an evaluation of this patient's problem was given us by the referring physician, mention having been made as early as 1963 of the possibility of a parathyroid tumor. Generally, parathyroid overactivity is heralded by manifestations of the oversecretion of parathyroid hormone in specific organ systems, viz., the renal, skeletal, or gastrointestinal systems. Following von Recklinghausen's description of the classic form of bone disease in 1891,<sup>16</sup> all patients were thought



to have skeletal involvement. Fuller Albright in 1934,<sup>1</sup> extended the diagnosis of hyperparathyroidism solely from bony manifestations when he initiated the screening of patients with renal stones. Urologists have found that routine screening of all their patients with stones reveals three percent to ten percent with hyperparathyroidism. This group remains the largest single source of patients who subsequently are proven to have parathyroid adenomata.

In 1944, Rogers<sup>15</sup> at the Mayo Clinic discovered adenomata of the parathyroid glands in two patients who had died of peptic ulcer disease. A small percentage of patients with peptic ulcer disease now are found to have parathyroid adenomas. Post-operative recurrences and medical failures accompany attempts to treat ulcers associated with parathyroid adenomas unless the tumor in the neck is first removed. The usual milk and antacid therapy in such a patient may produce renal damage, the milk-alkali syndrome. Why ulcers and an overabundance of parathyroid hormone coincide is not known.

In 1950, Oliver Cope and Perry Culver<sup>6</sup> investigated a patient with known hyperparathyroidism who died of pancreatitis. The description of this has now been accepted, but no explanation for the relationship had come forth until last year. Kelly<sup>10</sup> studied hyperparathyroidism and pancreatitis in the rat and concluded that the relationship was sound, operating through the acceleration of calcium-dependent conversion of trypsinogen to trypsin.

Associations have also been made between hyperparathyroidism and hypertension, uremia, and psychoses. An idea of the incidence of the disease can be gleaned from Gordan's article<sup>9</sup> in 1962, in which 104 patients were found to have hyperparathyroidism out of the 8,000 unselected patients that were screened.

Some have stated that "aching bones, renal stones, abdominal moans, and psychic groans" should call attention to this disease. The very vagueness of the symptom complex in mild disease requires some pattern to limit those to be investigated. Cope<sup>4</sup> suggests evaluating (a) all patients with any type of

bone disease, especially those with diffuse skeletal changes, (b) any patient relating a history of passing a renal stone, hematuria, or renal colic, (c) most peptic ulcer patients, especially those who appear to have the Zollinger-Ellison syndrome or those whose symptoms actually get worse while on adequate medical therapy, and such slightly unusual situations as young females with pancreatitis, (d) and those patients who present a combination of vague symptoms often involving more than one system. He feels that gallstones occur more frequently in those with hyperparathyroidism than in the population at large.

Our problem was to eliminate other causes for hypercalcemia. Malignancy is the most common cause.<sup>12</sup> The most frequent sites are the thyroid gland, the breast, the kidney, and in association with lymphocytic leukemia.<sup>11</sup> Certain tumors, e.g., bronchogenic carcinoma, secrete a parathyroid-hormone-like substance. Connor<sup>3</sup> felt this substance more closely resembled vitamin D. Phosphate would be conserved in a breast malignancy by a normal tubular reabsorption of phosphate, while it is lost in hyperparathyroidism. Gordan,<sup>9</sup> in 19 out of 20 patients with surgically proven hyperparathyroidism, showed the serum calcium to remain high even after giving them the equivalent of 200 mg. cortisol daily for one week. The hypercalcemia of malignancy, hypervitaminosis D, Boeck's sarcoid, thyrotoxicosis, and multiple myeloma is ordinarily suppressed by this large dose of cortisone. No indication of these causes of hypercalcemia was detected on physical examination, chest x-ray, intravenous pyelography, or peripheral blood smear in our patient.

Multiple myeloma and sarcoidosis can simulate hyperparathyroidism also. Serum protein electrophoretic patterns seen with adenomas have elevations in the alpha-2 and beta globulin peaks which serve to differentiate these three diseases.

Many papers have been written concerning the surgical approach to parathyroid disease. We were most fortunate in the ease with which this adenoma was located. Cope<sup>4</sup> discusses at length the locations wherein parathyroid adenomata have been located and the extent to which attempts for their retrieval must be carried. Of note are the



percentages of causes for hyperparathyroidism: 80 percent were due to a single adenoma, 13 percent were due to hyperplasia involving all four glands, four percent were due to carcinoma, and three percent were due to multiple adenomata.

The amount of adenomatous tissue is roughly proportional to the severity of the disease. A recent article by Lloyd<sup>13</sup> reveals a statistical correlation between the tumor weight and the serum calcium level. This finding could be helpful to the surgeon who finds what appears to be an adenoma, but its size belies the calcium abnormality that has been measured. His search should then proceed until sufficient weight of adenoma has been found.

The American College of Surgeons' Manual on Preoperative and Postoperative Care<sup>5</sup> presents a review of the essentials. All patients with hyperparathyroidism should be rehydrated, intravenously if necessary, with dextrose and water, or a physiologic electrolyte solution, and counseled to avoid calcium and alkali in their diet. The complications associated with a high serum calcium should be watched for and treated as necessary. Hypercoagulation of the blood and altered neural impulse transmission may occur with serum calcium levels of 20 mg/dl or above. Cardiac standstill may occur with serum calcium levels above 18 mg/dl. A fixed low specific gravity of the urine is due to

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calcific damage to the kidney and not over-hydration. Aluminum hydroxide should be used to manage gastrointestinal ulcers, not alkali and milk. Patients with fractures should be mobilized as soon as possible because the immobility increases the calcium loss from the bone into the serum with the danger of renal shutdown. Appropriate antibiotic treatment of urinary tract infections is indicated. Preoperatively, one must be prepared to handle the "parathyroid crisis" should it occur. This can be accomplished by the administration of phosphate and sulfate.<sup>2,7</sup> The complications that potentially attend rapid phosphate administration as emphasized in the editorial of Goldsmith and Ingbar<sup>8</sup> should be considered and their therapeutic dicta should be followed. It should be emphasized that hypercalcemia in conjunction with a hyperparathyroid crisis should be considered in the differential diagnosis of coma in every patient. Finally, the surgeon should prepare the patient for the common postoperative events, the possibility of tetany, and renal colic.

Postoperatively, the serum calcium level should be followed frequently. A decreased urine output for the first 24 hours should be expected as rehydration occurs. Low calcium intake should be maintained to (1) prove the success of the procedure, (2) judge the rate of descent of the serum calcium and thereby the avidity of the skeleton for calcium, and (3) help resolve renal stones. Tetany is an important postoperative consideration. This may be due to transient hypoparathyroidism or recalcification tetany, the latter being more frequent and can be anticipated by an elevated serum alkaline phosphatase preoperatively. The peak recalcification occurs in three weeks. One may need to give huge doses of vitamin D and calcium to control this. However, vitamin D should be discontinued as soon as possible to minimize the risk of renal calcinosis. An extraordinary feeling of apprehension and mental depression often occurs as a postoperative problem but was not apparent in this patient.

#### SUMMARY

A case of hyperparathyroidism due to a single adenoma in a patient with a twenty-year history of renal calculi is presented. The



primary intent is to recall the vagueness of its presentation and the futility of symptomatic treatment. Surgical excision remains the only curative mode of treatment, but the percentage of successful cervical explorations will be increased by thorough preoperative evaluation of the indirect measurements of increased parathormone activity. A significant number of patients with hyperparathyroidism are still discovered by serendipity.

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# Normal Lymphangiography of Upper and Lower Extremities

ANANTA SONGSENG, M.Sc., M.D.\*

*A relatively new diagnostic technique  
which will prove valuable in many  
difficult and obscure disorders also is  
contributing to our knowledge  
of human anatomy.*

## PART I

**DIRECT LYMPHANGIOGRAPHY** has been widely accepted as a method of choice in determining the normal anatomical and pathological aspects of the lymphatic system in the past several years. Kinmonth suggested this method in 1952. He utilized this technique to study lymphatic abnormalities in various forms of lymphedema. His method was later improved by several authors, for instance Jacobsson and Johansson (1959), Fuchs and Book-Hederstrom (1961), Sheehan and Hreshchyshyn (1961). Finally, Wallace and Jackson (1961), modified the technique and made it more practical for routine examinations. With new techniques, studies have been extended to include the lymph nodes in pelvic and retroperitoneal, as well as axillary regions. The

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\*A graduate of the Faculty of Medicine and Siriraj Hospital, University of Medical Science, Thailand, Ananta Songseng, M.D., is certified by both the American and Canadian Boards of Radiology. Work was done on this paper while Doctor Songseng was an Assistant Professor of Radiology at the University of Oklahoma School of Medicine. He returned to Thailand in January, 1969.

purposes of this study are to introduce a simple method of direct lymphangiography which was routinely used in our department and to report the result of the study of the normal roentgen anatomy and variants of the lymphatic system of the upper and lower extremities including axillary, pelvic and retroperitoneal areas. In addition, this study also set up a normal base line in determining the pathological changes of the lymphatic system.

## MATERIALS AND METHODS

### *Patient Material*

Direct lymphangiography of the upper and lower extremities was successfully performed in 85 patients during a period of 20 months in the Department of Radiology, University of Oklahoma Medical Center. This procedure was carried out as a diagnostic study on patients in whom there was the possibility of disease of pelvic, retroperitoneal and axillary nodes. Thirty-five were male and 50 were female. They ranged in age from 20 to 81 years with most cases from 30 to 60 years of age. Eight patients had lymphangiographic studies performed on the upper extremities. Fourteen of our cases had lymphoma, two had chronic lymphocytic leukemia, and 17 had carcinoma of the genitourinary tract. There were six miscellaneous lesions which included lymphedema. The other 46 patients displayed no lesions radiographically and these cases were selected for studying the normal anatomy and variations of the lymphatic system.



*Technique*

Normal lymph vessels are quite small, transparent and difficult to locate. To effect their visibility, an injection of 0.5 ml of a mixture containing equal amounts of ten percent blue violet (alphazurine 2G) and one percent Xylocaine, is made intradermally into the interdigital web space between the first and second digits, or on some occasions between the second and third digits of the lower extremities. Similarly, the injection should be made intradermally into the interdigital web between first and second digits or between second and third digits of the upper extremities. We tried several kinds of dye, such as Evans blue, Indigo-Carmine, Sky Blue and methylene blue and found that the patent blue violet was the preferable dye for use in outlining the lymphatics. It was also quickly absorbed, and therefore used throughout our examinations. The blue dye is selectively absorbed by the lymph capillaries and drains into lymph vessels on the dorsum of the foot, making them readily visible within ten to 15 minutes. Slight massage and pressure on the injected area facilitates the absorption. The blue-stained lymph vessels are usually visible through the skin.

With aseptic technique, a small longitudinal skin incision is made proximal to the injection site (usually in the area corresponding to the base of the first metatarsal bone). If the lymph vessel is visible through the skin, the incision is made parallel to its course. It is necessary to be extremely careful at this point so that the incision is made subcutaneously, and too deep a cut will go through the rich lymphatic layer and will sacrifice the lymph vessels. When a lymphatic channel carrying blue dye is examined and isolated, the untied ligature then is placed around the vessel proximally, obstructing it temporarily. By massaging the injection site, the stasis of lymph formed in the lymph channel will be sufficiently dilated. B-D lymphangiographic sets with small narrow gauge needles (27-30 gauge, depending on the caliber of the lymphatic vessel) may be used. The needle is inserted into the lymph vessel to a depth of about

five mm, then anchored securely with a ligature.

Fifteen ml of Ethiodol (an ethyl ester of poppy seed oil containing 37 percent iodine) is drawn into the 30 ml B-D syringe which is placed in the automatic lymphangiographic pump (Holter Company, Pennsylvania), and connected with the adapter of the lymphangiographic set. Ethiodol is the most desirable contrast medium which was used throughout the study. It gives excellent contrast and demonstrates well-outlined lymph nodes in various regions, and it does not permanently damage the lymph nodes. The automatic injector offers a steady and constant pressure. About eight to ten ml of Ethiodol is injected slowly into the lymphatic system and the optimum pressure used is in the range of eight to 12 pounds per square inch. Undue increase in pressure should be avoided because it can cause rupture of the lymphatic vessel and extravasation of the contrast medium into the soft tissues. The time of injection in the average patient is approximately one to one and one-half hours.

As a rule, Ethiodol is required in amounts of about eight ml for each lower extremity and of about five to seven ml for each upper extremity. It is suggested that the patient be kept in the recumbent position, and that the extremities should not be moved unless absolutely necessary. The use of excess contrast medium may cause lipoid pneumonia or pulmonary embolism, which is an unfavorable complication.

*Fluoroscopy and Roentgenography*

After injection of one to two ml of Ethiodol, fluoroscopy of the lower or upper extremities, depending on the site of injection, should be made to make sure that the opaque medium is injected into the proper lymph channel. If fluoroscopy is not available, portable x-ray examination can be substituted. Roentgenograms are usually taken in two series: (1) immediately following completion of the injection for best demonstration of the lymph vessels; and (2) after 24 to 48 hours for best observation of the lymph nodes.

Ethiodol will leave the lymph vessels about two to three hours after the completion of the injection, but some filling may be delayed as long as 12 hours. The material



normally will stay in the lymph nodes, and excess amounts will pass into the systemic circulation via the thoracic duct draining into the left venous angle between the internal jugular vein and the subclavian vein; therefore 24 to 48 hour films will be best for demonstration of the lymph nodes. Lymph nodes will be fully visible for three months, then slow absorption will occur. Some nodes may be seen for as long as two years.

Anteroposterior, oblique, lateral and stereoscopic views of the pelvis and abdomen are taken for complete observation of the lymph vessels and lymph nodes, and an anteroposterior view of the chest using the dorsal spine technique will be proper for observation of the thoracic duct. In questionable cases, laminograms and magnified views in certain areas will be indicated, in order to locate the lymph nodes or for clinically diagnosed pathological lymph nodes.

Particular views can be taken in similar fashion in the upper extremities and axillary regions.

RESULTS

Descriptive terms and interpretations of the roentgen anatomy of the lymph vessels

and lymph nodes in our investigations are based primarily upon the classic anatomic studies of Reiffenstuhl (1964), and Rouviere (1938).

In addition, the roentgen anatomic studies of Gergely (1938), Jacobsson and Johansson (1959), Malek, *et al.* (1959), Fuchs and Book-Hederstrom (1961) and Herman, *et al.* (1963), have been considered and compared to our investigations.

*Superficial Lymphatic Vessels of the Lower Extremities*

Lymph vessels of the lower extremities on radiographic demonstration vary from 0.5 to 1.5 mm in diameter. They increase centrally in number by dichotomic division and eventually terminate in inguinal lymph nodes. They do not significantly increase in caliber as they extend proximally. Small dilatations about 0.5 to one cm apart usually suggest the location of the valves, giving the lymph vessels, when filled with contrast medium, a beaded appearance along their entire length. Because the circulation in the lymphatic system is passive, there are many valves present to prevent reflux (Figure 1).

The superficial lymphatic vessels of the lower extremities normally accompany the veins and run parallel to them. According to the veins which they follow, we can class-

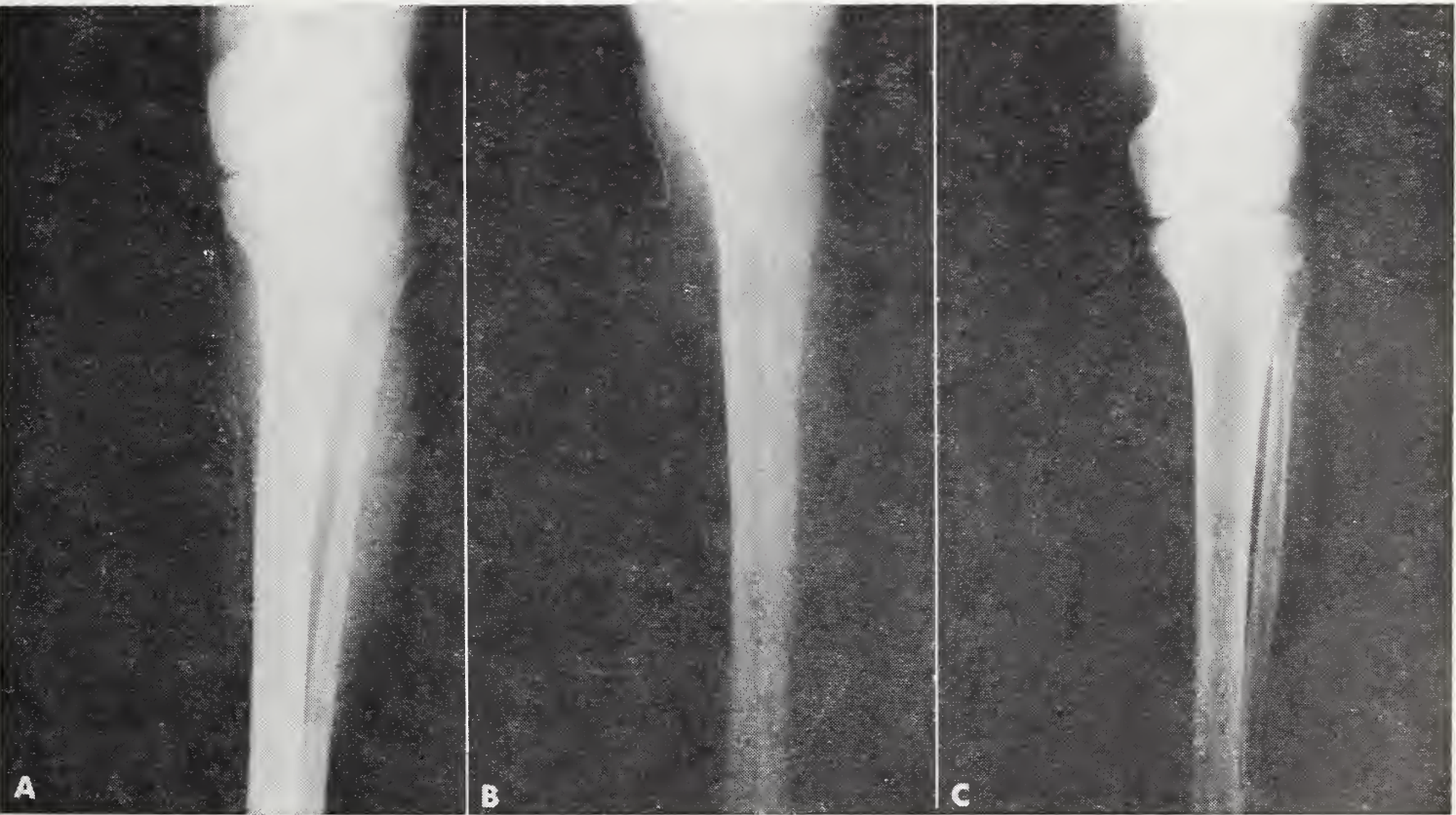


Figure 1. Normal lymphatics of lower extremity. A) medical distribution; B) normal variant of medical distribution with only one vessel in leg region being noted; C) some lateral distribution.





Figure 2. Lymphatics paralleling greater saphenous vein in thigh and terminating in inguinal nodes.

ify the superficial lymphatics into two major groups: (1) greater saphenous group; and (2) lesser saphenous group.

#### *Greater Saphenous Lymphatic Vessels*

This group of lymphatics always drains the greater part of the lower leg as well as the thigh. Anatomically, this group can be divided into two subdivisions: medial and lateral lymphatics.

When the injection is made into the lymph vessel situated on the medial aspect of the dorsum of the foot, as in the majority of patients in our series, filling, as a rule, appears in only the medial group (Figure 1). We found much variation in the number of observed lymphatics. About five to ten lymph vessels on the average were identified in the lower leg region. Exceptions were found in two patients in whom there was noted filling of only one vessel in the leg and of about three or more lymph vessels in the thigh (Figures 1 and 2). These lymph

vessels extended upward toward and beyond the medial side of the knee joint.

When the opaque medium was injected into a vessel located more laterally on the dorsum of the foot, very often the lateral lymphatics filled and extend upward, converging to join the medial group above or just below the knee (Figure 1). Occasionally, both medial and lateral groups of the greater saphenous lymphatics filled at the same time. These lymphatics increase in number by dichotomic division as they ascend to the thigh and inguinal region. They terminate in the nodes of the inferior group and in a few nodes of the superior group of inguinal nodes. The number of lymph vessels, observed in the inguinal region, may be as many as ten to 20 in the average case.

#### *Lesser Saphenous Lymphatic Vessels*

It was attempted to cannulate this group of lymphatics in eight cases in this series, the injection being made into the lymphatic vessel below and posterior to the lateral malleolus as described by Malek, *et al.* (1959). Only one lymph vessel filled in two cases. It

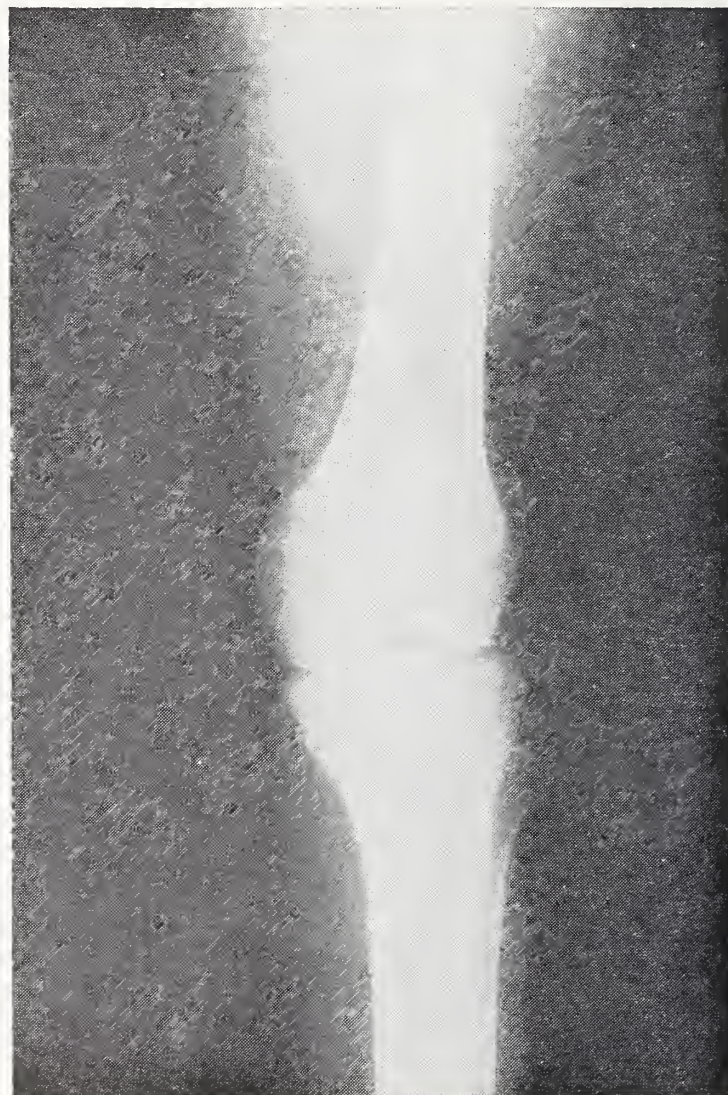


Figure 3. Lesser saphenous lymphatic vessel.





Figure 4. Inguinal nodes. Afferent vessels entering the nodes and efferent vessels which are larger and fewer in number arising from nodes and emptying in external iliac nodes.

extended all the way on the lateral aspect of the leg then turned abruptly to accompany the medial group above the knee (Figure 3), instead of terminating in the popliteal node. In the remaining six cases, the lymphatic vessels adjacent to the lesser saphenous vein were dissected and injected. Again the lesser saphenous lymph vessel was filled and crossed over to parallel the greater saphenous lymphatics just below the knee. There was no observation of the popliteal nodes in our cases.

#### *Lymphatic Vessels of the Iliopelvic and Aortic Regions*

There was no communication between the greater and lesser saphenous groups of vessels during their course in the leg and thigh, until they terminated in inguinal nodes (Figure 2). Several vessels terminated in the external iliac nodes. After this fewer and larger efferent channels with distinctive numerous valves arose from each individual node and extended proximally to the external iliac, common iliac and para-aortic nodes (Figures 4 and 5). Finally, the cisterna chyli was identified at the level of the first or second lumbar vertebra and the thoracic duct which is located on the left side of the posterior mediastinum, was seen to extend into the venous angle between the left subclavian and internal jugular veins

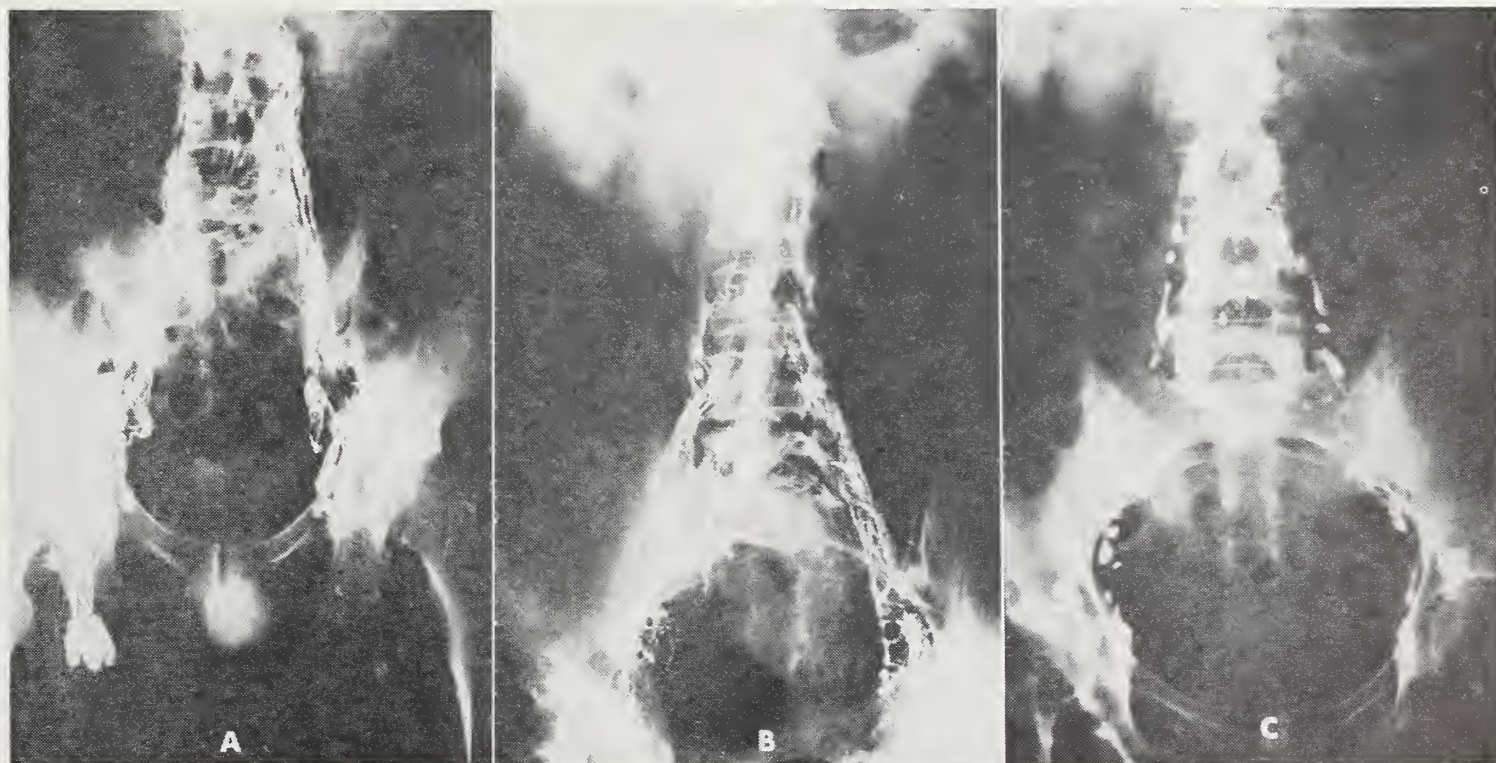


Figure 5. Normal lymphatic distribution. A) pelvic, inguinal, external and common iliac areas; B) para-aortic lymphatics and nodes; C) para-aortic nodes (24 hour roentgenogram).



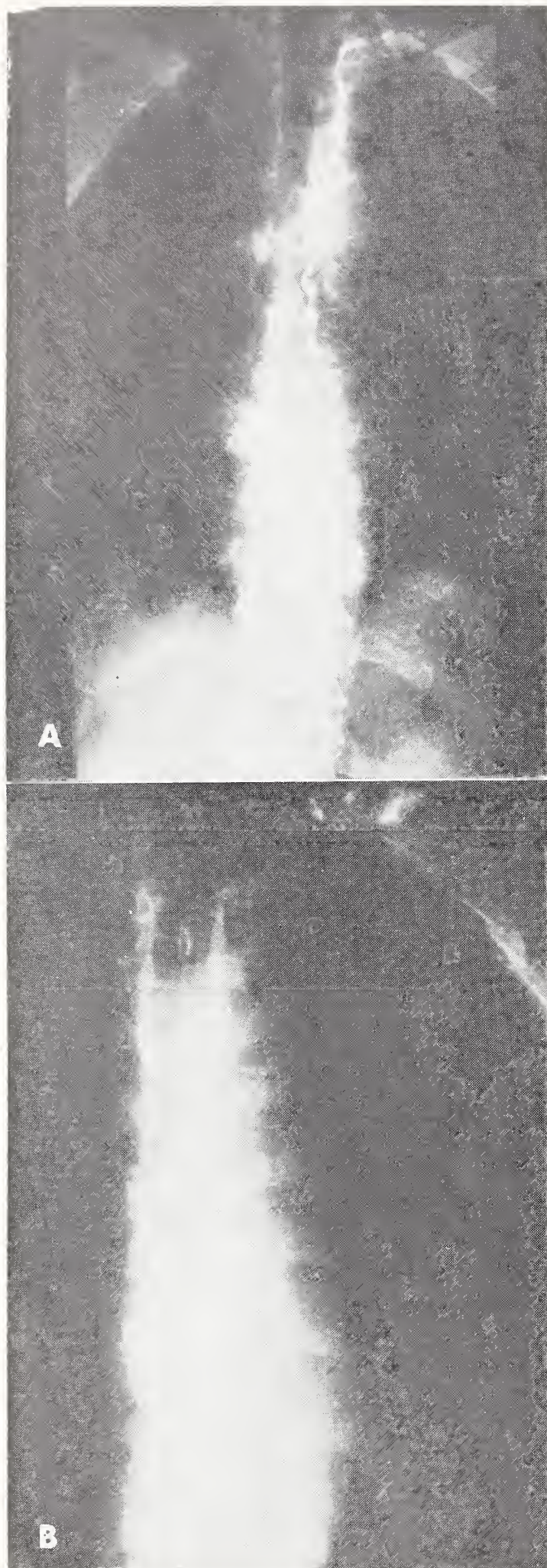


Figure 6. A) Thoracic duct, notice cisterna chyli; B) supraclavicular nodes.

(Figure 6). A few supraclavicular nodes were filled due to reflux of the opaque medium from the thoracic duct (Figure 6B). Occasionally the posterior mediastinal lymph nodes were observed as having the same principles as above. Interestingly enough, there were many communicating channels between the two sides of para-aortic nodes along the entire lumbar spine but most interconnecting networks were at the promontory of the sacrum.

#### *Superficial Lymphatic Vessels of the Upper Extremities*

Demonstrations of the lymph vessels of the upper extremities were extremely difficult because of the tenuous size of these structures. The lymph vessel at the dorsum of the wrist is the site of predilection for injection. There are similarities of the lymphatics of upper and lower extremities in many respects. As in the lower extremity, they follow the course of the veins, usually along the cephalic and basilic veins on the outer and inner aspects of the forearm and upper arm respectively, and finally empty into the axillary nodes. In the axillary region the lymph vessels observed numbered about five to ten in our cases. Figure 7 illustrates the lymph vessels following the basilic veins on the medial aspect of the upper arm and terminating in the axillary nodes. Notice the intercalated nodes just above the elbow which are the so-called supratrochlear nodes.

## PART II

### *General Appearance of the Lymph Nodes*

Evaluation of the lymph nodes generally must be made on the roentgenograms taken 24 to 48 hours after the injection because at about this time the contrast medium in the lymphatics will have passed into the systemic circulation or be located in the lymph nodes. Normal nodes have a kidney or bean shape and they vary from 0.5 to four cm in diameter. It has been found that the sizes of the lymph nodes vary inversely to the number of nodes. If the sizes of the lymph nodes increase, then their number will be decreased, and the reverse is also true. The outline of the node is sharp and distinctive with a small indentation in one side suggesting a hilum of the node (Figure 8). The internal appearances of the nodes will show a



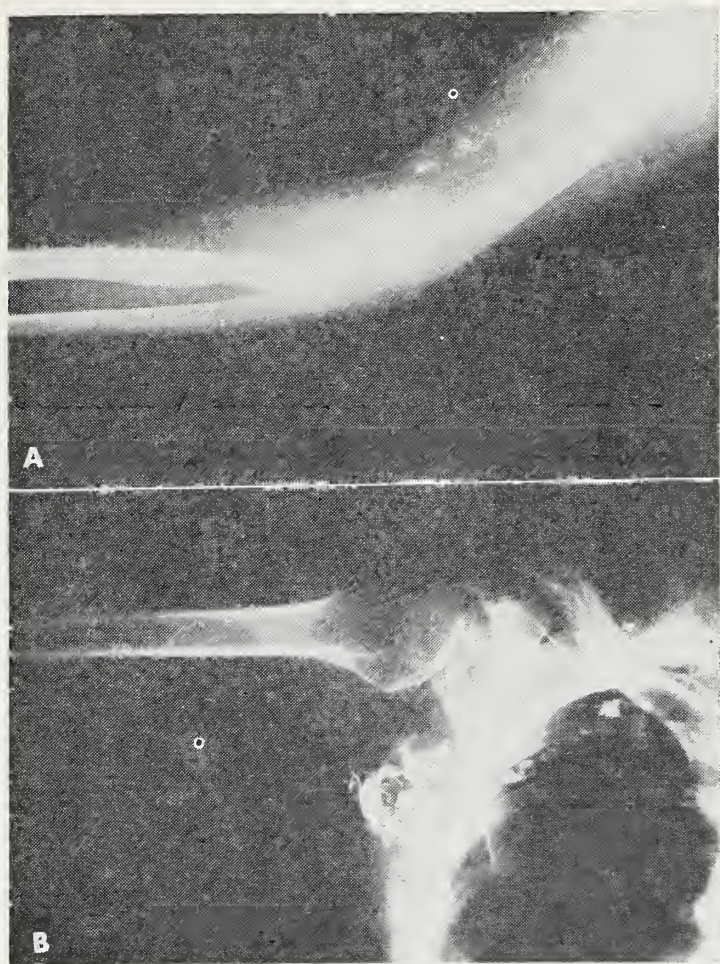


Figure 7. A) Normal lymphatics of upper extremity, (notice two supratrochlear nodes); B) normal axillary lymphatics and lymph nodes.

uniform, homogeneous and reticular pattern.

#### *Anatomic Groups of Inguinal, Iliopelvic and Aortic Nodes*

Groupings of the lymph nodes were made according to the relationship of the major arteries, the aorta, common iliac, external and internal iliac arteries, etc. In our cases, the nodes could be named by relating them to normal arteriograms. Identifications were made on anteroposterior and oblique projections. The stereoscopic views were very helpful in locating the deep seated nodes.

#### *Inguinal Nodes*

These nodes are about eight to ten in number and are located just below a line drawn from the anterior superior iliac spine to the symphysis pubis. According to Rouviere (1938) the inguinal nodes are divided into superficial and deep nodes.

In our study, it was rather difficult to identify the observed nodes by their location in depth. Therefore, we called all these nodes superficial inguinal nodes since they receive drainage from the injected lymph vessels. And by location, these nodes were classified

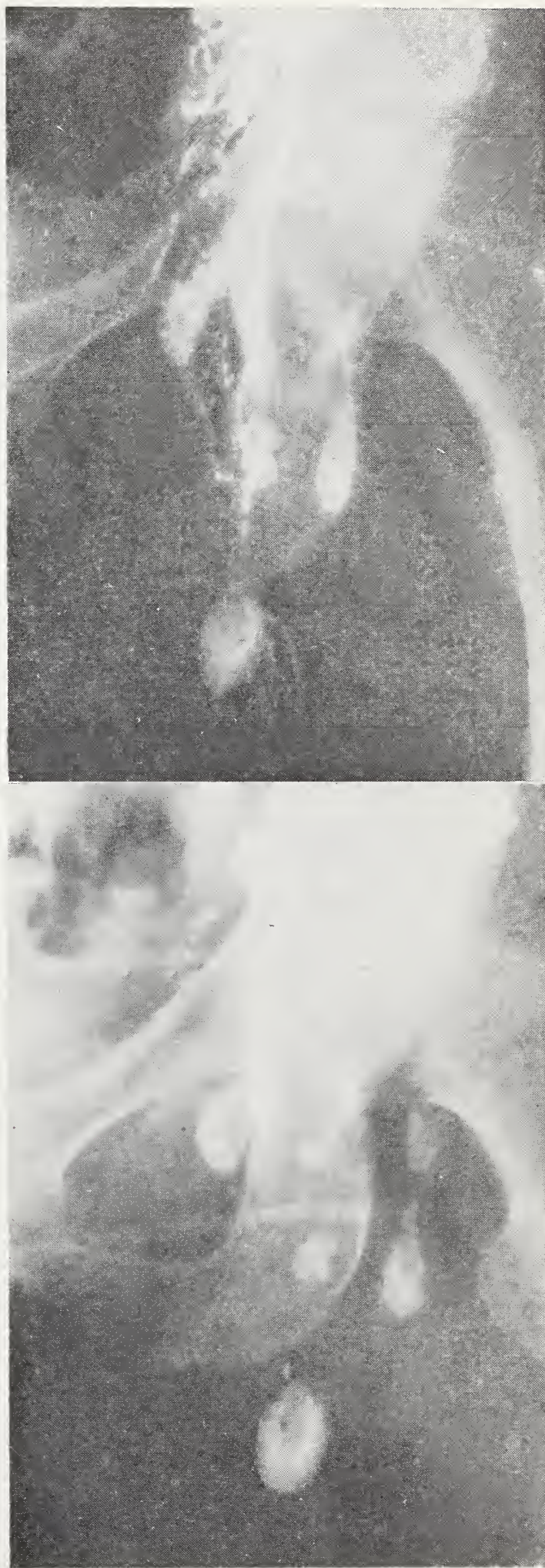


Figure 8. A) Normal individual nodes with lymphatic vessels; B) normal nodes (24 hour roentgenogram.) Notice the hilar region of inferior node showing a radiolucent filling defect.





Figure 9. Normal inguinal lymph nodes.

as: (A) a superior group located just below the line described, and (B) an inferior group located superficially and lying close to the medial side of the thigh.

It was recognized that these nodes received the drainage from both greater and lesser saphenous groups and the efferent vessels arising from these nodes emptied into the lower external iliac nodes (Figure 9).

#### *Iliopelvic Nodes*

*External iliac nodes.* The external nodes depicted in Figure 10 are subdivided according to Reiffenstuhl (1964) into:

1) Lateral external iliac nodes, which can be differentiated further into superficial and deep nodes.

A) Superficial lateral external iliac nodes lie on the outer aspect of the external iliac artery and are three to four in number. The lower nodes of the chain receive the direct drainage from the lateral nodes of the superior inguinal nodes.

B) Deep lateral external iliac nodes (about one to two in number) are completely covered by the external iliac artery and vein, lying in the depths between the artery and psoas major muscle; these receive lymph from the medial and the superficial lateral external iliac nodes.

2) Medial external iliac nodes (two to five in number), which receive afferent vessels from the superior and inferior inguinal nodes. Reiffenstuhl (1964) described this chain as an interiliac chain which is located between external iliac and internal iliac arteries, from their junction down to the obturator artery.

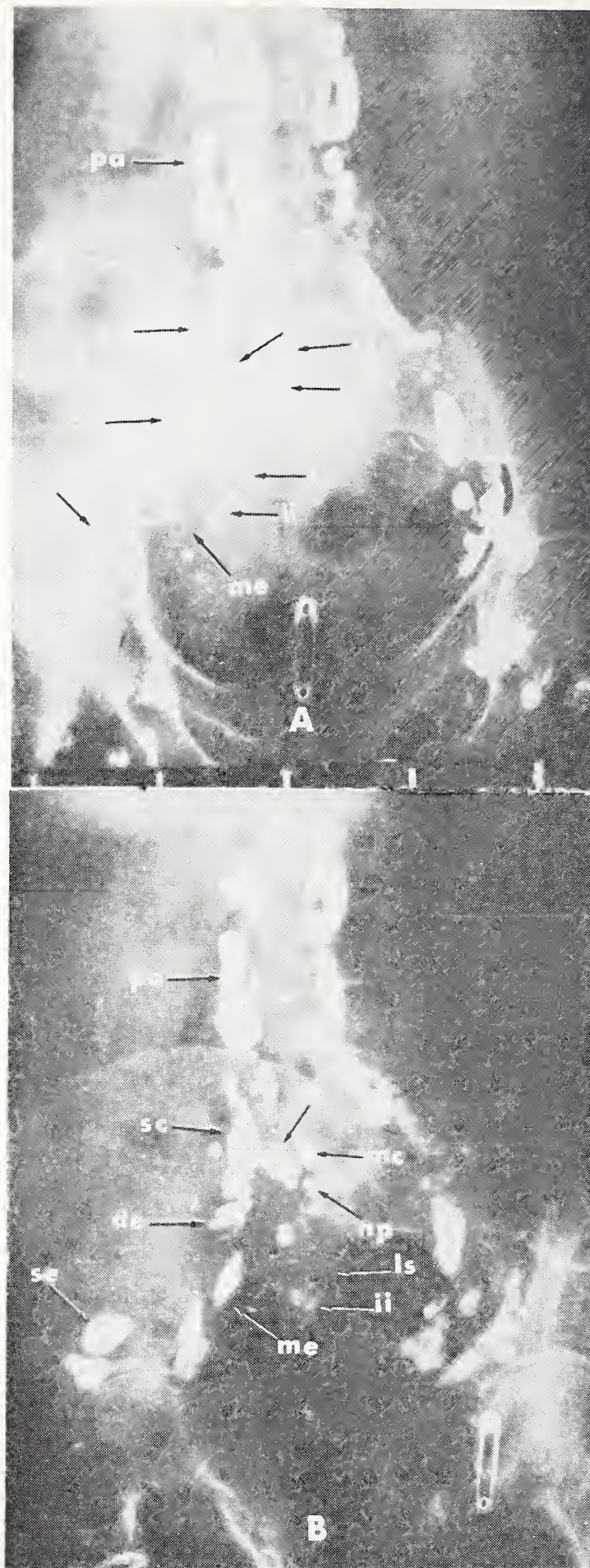


Figure 10. A) Anteroposterior roentgenogram (24 hour); B) right posterior oblique roentgenogram (24 hour); se) superficial lateral external iliac nodes; de) deep lateral external iliac nodes; me) medial external iliac nodes; ii) internal iliac nodes; ls) lateral sacral nodes; sc) superficial lateral common iliac nodes; dc) deep lateral common iliac nodes; mc) medial common iliac nodes; np) nodes of promontory; pa) para-aortic nodes.



*Hypogastric or internal iliac nodes.* About 15 cases, or 35 percent, of our cases showed this group, and about two to seven nodes were seen on lymphangiograms. They lie in the junction of branches of the internal iliac artery and are deep-seated in the pelvis. They can be divided into subgroups:

1) Main internal iliac nodes, located at the main stem of the artery and not differentiated into individual groups.

2) Lateral sacral nodes (one to two in number), identified distinctly on oblique and lateral projections along the anterior surface of the sacrum corresponding to second, third and fourth sacral foramina.

*Common iliac nodes.* This chain of lymph nodes (five to ten in number) lies along the common iliac artery and can be divided into subgroups:

1) Lateral common iliac nodes which divide further into superficial and deep nodes:

A) Superficial lateral common iliac nodes visible along the lateral aspect of the common artery.

B) Deep lateral common iliac nodes located on the posterior or deep aspect of the blood vessels.

2) Medial common iliac nodes lie on the medial side of the common iliac artery.

#### *Aortic Nodes*

Several channels from the common iliac nodes drain into the aortic nodes (20 to 30 in number), which are largely confined to the medial and lateral aspects of the abdominal aorta from its bifurcation at L4 to the level as high as L2. The lymph vessels of these nodes converge to form a right and left lumbar lymph trunk and terminate in the cisterna chyli. For practical purposes, we usually call these nodes right and left para-aortic nodes. With the help of stereoscopic views, some lymph nodes can be recognized in front and behind the aorta which can be named as pre- and post-aortic nodes. They number about five to ten lymph nodes.

#### *Anatomic Groups of Axillary Lymph Nodes*

As a rule, the axillary, as well as the supraclavicular nodes were demonstrated and varied in size and number. About 20 to 30 nodes in the axillary region and two to five nodes in the supraclavicular region were observed (Figure 11).

Groupings of the axillary lymph nodes

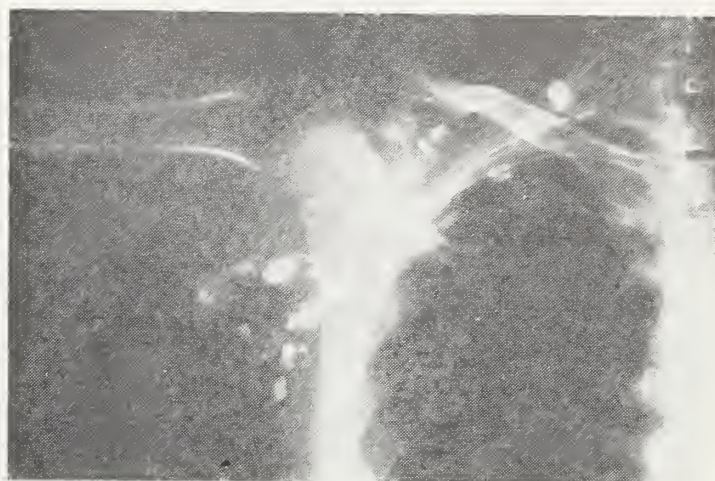


Figure 11. Normal axillary and supraclavicular lymph nodes.

can be arranged in relationship to the walls and blood vessels of the axilla. The same difficulty has been disclosed in the axillary nodes as was noted in the pelvic nodes, that of a superimposition of the nodes.

The lateral, medial, anterior, apical and supraclavicular nodes were apparently differentiated, but we were unable to separate the posterior and central groups from each other.

From these axillary nodes, the subclavian lymph trunk arises and terminates in the subclavian vein via the right lymphatic duct on the right side and the thoracic duct on the left side.

#### DISCUSSION

Our lymphangiographic studies essentially substantiate the anatomical description of lymphatic structures in the literature, which is based on cadaver dissection.

We realize that our study demonstrates only the superficial lymphatic vessels and superficial and deep lymph nodes in the inguinal, pelvic, retroperitoneal and axillary regions.

According to Brash in Cunningham's text book of Anatomy (1950), the deep lymph vessels of the lower limb accompany the deep blood vessels. Those are the anterior tibial, posterior tibial and peroneal vessels. These lymphatics eventually empty into the popliteal nodes from which the efferent vessels arise and proceed along the femoral vessels in the adductor (Hunter's) canal to end in the deep inguinal nodes. In our studies we are unable to demonstrate this deep lymphatic system of the lower extremity. Lym-



phangiography does not demonstrate the popliteal nodes even though the injection was made on the posterolateral aspect of the external malleolus of the foot. This is contrary to the results of Malek, *et al.* (1959), which show that in the posterior aspect of the upper two-thirds of the calf, usually one or two superficial lymphatic vessels may be seen proceeding medially to end in superficial popliteal nodes. They drain into the deep-seated popliteal nodes. From these, efferent lymph vessels arise, which accompany the femoral artery to terminate in deep inguinal lymph nodes. Our findings indicate that the greater saphenous group drains the greater part of the lower extremity. Although the lesser saphenous group exists, it drains only a minor part of the lower extremity and empties directly into the superficial inguinal nodes without draining into the popliteal nodes.

Lymphangiography is indeed helpful to observe the regional lymph nodes which receive the primary drainage of certain viscera in the abdominal and pelvic cavities, and especially from the gonads. The lymphatics of the testes terminate in the para-aortic nodes while the lymphatic drainage of the uterine cervix is directed to the external, internal iliac, and common iliac nodes. Lymphatics from the body of the uterus and the urinary bladder, as well as the prostate and seminal vesicles in the male terminate in the same nodes.

One case in our series showed a variation from the common arrangement in the beginning of the thoracic duct. Instead of beginning as the cisterna chyli, the thoracic duct was formed by one right lumbar lymph trunk and two left lumbar lymph trunks joining in front of the body of the second lumbar vertebra. The celiac and mesenteric lymph nodes normally will not be filled by our method.

Similar to the lower extremity, lymphangiography of the upper extremity does not show the deep lymphatic vessels and lymph nodes along the deep vessels of the forearm, in the cubital fossa and in the upper arm. However, the axillary lymph nodes are well demonstrated and this indicates a possible means of locating advanced metastasis in

the regional lymph nodes from primary malignancy of the breasts. Furthermore, we have shown that the interconnecting lymphatic channels from various groups of axillary lymph nodes drain into the apical lymph nodes from which efferent vessels arise and empty into the supraclavicular nodes. The subclavian lymph trunk drains the lymph from these nodes into the junction of the internal jugular and subclavian veins. This passage of lymph from the supraclavicular nodes is described as atypical in anatomical literature.

Arteriography, venography, and intravenous pyelography can be combined with lymphangiography. This will add more information, especially in demonstrating relations of the lymph nodes.

#### SUMMARY AND CONCLUSIONS

The historical background of lymphangiography has been reviewed. Contrast filling of inguinal, pelvic, retroperitoneal and axillary nodes may be achieved best by automatic injection of Ethiodol oily contrast material directly into the lymph vessels on the dorsum of the foot or hand. Serial roentgenograms taken in different positions and at different times give the most reliable results in the study of both normal and abnormal states of lymphatic system. In a series of 46 patients in whom lymphangiography was radiographically negative, a study on the anatomy and variations of the lymphatic systems was carried out. It was found that the anatomy of certain regions of the body can be well demonstrated by lymphangiography and the findings closely correlated with the anatomical description of the lymphatic system by Rouviere and Reiffenstuhl. It was impossible at this time to demonstrate the visceral lymphatic system. However, in this study, the roentgen anatomy of the lymphatic system of the extremities has been described in detail. This will serve as a normal base line in the accurate diagnosis of pathological changes. □

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# Hodgkin's Disease:

## Curative Treatment With Radiation Therapy

CARL R. BOGARDUS, JR., M.D.

*Hodgkin's Disease makes up 45 percent of the lymphomas. Although still listed as an incurable disease in some medical textbooks, favorable histopathology and staging may allow as high as 89 percent cure with radiation therapy.*

IN 1832 THE curator of the museum at Guy's Hospital in London, Thomas Hodgkin (1798-1866), described seven patients with lymph node enlargement, splenic enlargement, cachexia, and a fatal termination.<sup>1</sup>

In 1865 Wilks included a detailed study of these seven cases, added eleven of his own, and introduced the term Hodgkin's disease. Various names have been placed on this condition, but it appears that Hodgkin's disease will be the one that remains.

The incidence of Hodgkin's disease is estimated at five cases per 100,000. It is twice as common in males and has a bimodal curve peaking at 25 to 35 years of age and at 65 to 75 years of age.

Lymphomas may arise in areas other than lymph nodes, such as the stomach, nasopharynx and tonsil, and, in fact, they may arise in any lymphoid tissues of almost any mucus-lined organ.

Relative Percentage of Lymphomas	
Hodgkin's disease	45%
Lymphosarcoma	35%
Reticulum cell sarcoma	15%
Giant follicular lymphoma	5%

### PATHOLOGY

The lymphadenopathy of Hodgkin's disease is a result of formation of pleomorphic reticulum cells with an increase in lymphocytes. The characteristic Reed-Sternberg cell is thought to be a neoplastic variety of the reticulum cell. Hodgkin's disease has been classified according to three types of cell morphology:

1. *Paragranuloma Hodgkin's*: demonstrates no necrosis or fibrosis.
2. *Granuloma type Hodgkin's*: In the granuloma type there is a marked pleomorphism, many Reed-Sternberg cells, eosinophils, necrosis and fibrosis.
3. *Sarcoma type Hodgkin's*: Malignant infiltrates of extra-nodal structures by large neoplastic reticulum cells. Reed-Sternberg cells are abundantly present. The prognosis is much worse for this form.

A new histopathologic classification of Hodgkin's disease was proposed at the Rye, New York, Conference in 1966, sponsored by the American Cancer Society and the National Cancer Institute.<sup>2</sup>

This new classification consists of four groups:



1. Lymphocytic predominance.
2. Nodular sclerosis.
3. Mixed cellularity.
4. Lymphocytic depletion.

These types may be related to the older types as follows: Lymphocytic predominance includes paraganuloma and some granuloma cases. Nodular sclerosis is a subdivision of granuloma, based primarily upon the presence of collagenous bands. Mixed cellularity includes granuloma cases without this characteristic. Lymphocytic depletion includes the old sarcoma group and some cases formerly classified as granuloma.

Keller, *et al.*,<sup>2</sup> reported on a series of 179 patients whose slides were reviewed, utilizing this new classification system. It was found that, with this blind study, a group of pathologists were able to agree, in the majority of cases, on the individual histopathology of each case of Hodgkin's disease.

A correlation was carried out in an attempt to compare the new histopathology to the survival statistics on this group of patients. They found a five-year survival rate for all stages as follows:

Lymphocytic predominance	89%
Nodular sclerosis	70%
Mixed cell type	38%
Lymphocytic depletion	39%

It is of further interest to note that if only Stages I and II are included, the five-year survival rates are as follows:

Lymphocytic predominance	100%
Nodular sclerosis	72%
Mixed cellularity	49%

An obvious conclusion from this is that the lymphocytic predominance, corresponding to the older paraganuloma, still maintains the best prognosis, and the lymphocytic depletion, which corresponds to the older sarcoma group, still retains the worst prognosis.

#### STAGING

Clinical staging is extremely useful in all lymphomas. The treatment of choice and the ultimate survival of Hodgkin's disease is very directly related to the clinical staging of the disease when first treated.

The following system of clinical staging is used at the University of Oklahoma Med-

ical Center. This system is very similar to that used by many others:

#### STAGING

- Stage 0: No detectable disease; diagnosis by excisional biopsy of solitary node.
- Stage I: Involvement of only one lymph node group.
- Stage II: Involvement of two or more contiguous lymph node regions confined to above or below the diaphragm. Not including intra-abdominal disease.
- Stage III: Involvement of node groups on both sides of the diaphragm but limited to nodes, spleen or Waldeyer's ring.
- Stage IV: Involvement of bone, bone marrow, lung parenchyma, pleura, skin, liver, G.I. tract, central nervous system or kidneys.
- All Stages: A. No systemic symptoms.  
B. Systemic symptoms.

#### LYMPHANGIOGRAPHY

Staging is very important in regard to therapy and prognosis. Until recently, this was done only clinically. This direct touch method leaves out the large retroperitoneal area. Intravenous urography may detect some nodal enlargement; however, the nodes must be large enough to displace the ureters for this method to be effective.

A major contribution to diagnostic evaluation of the patient with Hodgkin's disease has been the bilateral lower extremity lym-

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Figure 1. Representative bilateral lower extremity lymphangiogram. This is a film of the early post-injection phase, demonstrating both visualization of lymph nodes and lymphatic channels. This lymphangiogram is reported as positive for lymphoma involvement of the nodes.

phangiogram (Figure 1). The demonstration of otherwise occult retroperitoneal lymph node involvement is facilitated. The staging of the disease is made more accurate, and the radiation therapy fields are enlarged to include areas which otherwise would not have been treated.

Lymphangiography is a direct method of roentgenographic visualization of lymphatics and lymph nodes. This relatively benign procedure of injecting radiopaque contrast media into the peripheral lymphatics of both lower extremities opacifies the lymphatic channels for the first 24 hours. The lymph nodes in the femoral, inguinal, iliac, and para-aortic groups often remain visualized for as long as one year or more. This method does not outline the perirectal, perivesical, or omental nodes. Many people have found that a significant percentage of the cases initially staged as I or II actually became Stage III after lymphangiography and

the discovery of abdominal lymphatic involvement.

J. W. Davidson<sup>3</sup> recently reported a series of 125 lymphangiographic studies in the different lymphomas, with the result that, of 95 examinations in Hodgkin's disease, 48 were abnormal, 38 normal and nine suspicious for abnormality. It was their conclusion that lymphangiography in the assessment in Hodgkin's disease in Stages I and II advanced the staging of 36 percent of the patients and may suggest abnormality in a further 16 percent. On clinical grounds, previous experiences indicate that approximately two out of three patients have occult disease at the time of initial assessment, and this study demonstrated that lymphangiography can detect retroperitoneal disease in a significant number of these cases.

#### AIM OF TREATMENT

Many physicians take a pessimistic view in regard to Hodgkin's disease being multifocal in origin and invariably fatal. Many people find it extremely difficult, if not impossible, to logically irradiate an apparently localized asymptomatic lymphoma in a radical fashion. Such an attitude often leads to deferring therapy until symptoms are present and the disease has advanced. Frequently low dose, limited field irradiation is given and this combination yields an extremely poor overall survival in patients so treated.

When a patient is told that he has Hodgkin's disease, he and his physician turn to the textbooks, which suggest that his is an incurable condition.<sup>4</sup> It is a grave error, especially on the part of the treating physician, to accept the diagnosis of Hodgkin's disease as implying a fatal outcome, and even worse to base one's treatment philosophy on this assumption. The physician must realize that the hopeless prognosis of Hodgkin's disease still found in these textbooks is highly incorrect. Procrastination, the initial treatment with chemotherapy, and irradiation to inadequate fields or in inadequate amounts can lose the chances for cure.

There are two separate and distinct goals in the management of Hodgkin's disease. The first goal is a cure. The second is palli-



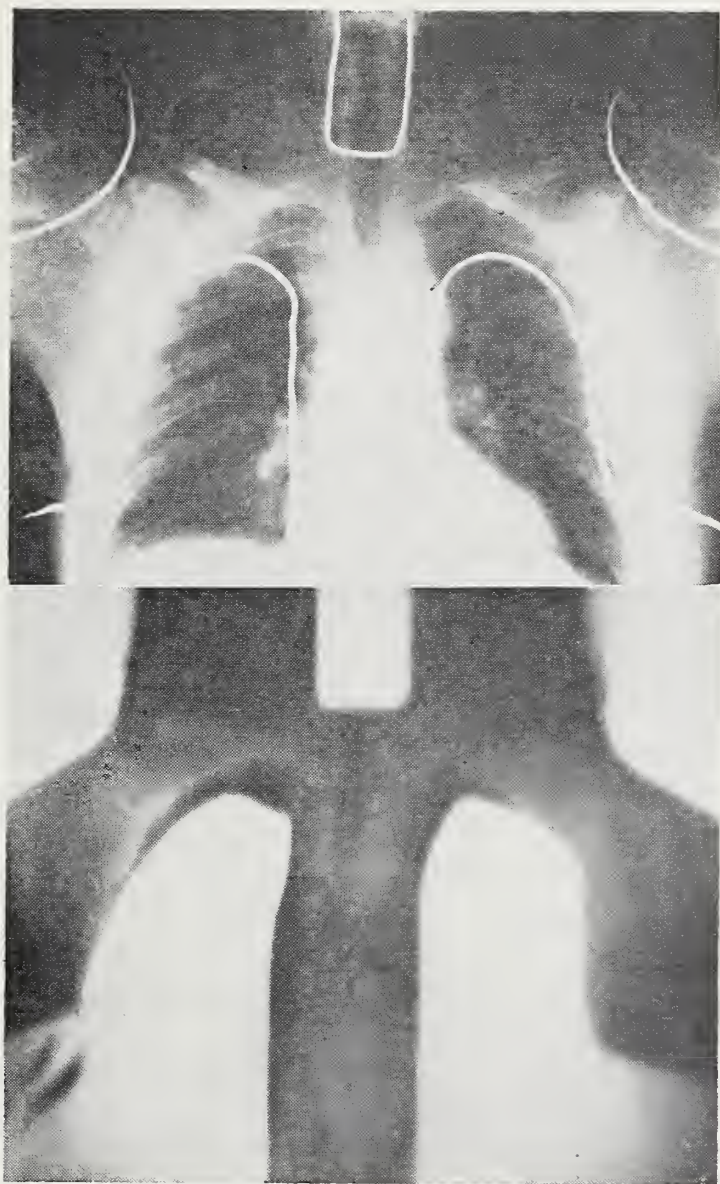


Figure 2. Upper mantle field for irradiation of both the primary involved lymphatic site as well as prophylactic irradiation of adjacent lymphatic areas.

Figure A outlines the proposed treatment areas on a standard roentgenogram.

Figure B outlines the areas actually treated with the shielding blocks in place. This roentgenogram was made with the treatment machine giving a true indication of the actual irradiated areas.

ation of symptomatology, which may be achieved with great regularity, but, unfortunately, may not be accompanied by major prolongation of life. Stages I and II Hodgkin's disease must always have treatment directed toward a cure. In Stage IV a cure is often impossible because of the involvement of organs which will not tolerate curative doses of irradiation. Stage III forms an intermediate group in which a cure must be attempted, but may or may not be reached.<sup>5</sup>

It should be noted that the primary management of Hodgkin's disease is a sophisticated and difficult undertaking. The large treatment fields and complex treatment

planning employed make special demands upon the ability of the radiation therapist and his equipment.

It must be stressed that only the physician who initially treats the early patient with Hodgkin's disease has a reasonable chance of curing the patient. You, the patient's managing physician, must remember that there is no place for pessimistic procrastination, nor for therapeutic half-measures in the treatment of potentially curable Hodgkin's disease.

#### TREATMENT METHOD

Proof that Hodgkin's disease may be unicentric in origin is seen from the occasional permanent control by localized radiation therapy only to the involved lymph node area. If one accepts the fact that Hodgkin's disease may be unicentric in origin, then vigorous local irradiation with the inclusion of adjacent areas becomes very rational treatment. Indeed, this becomes the *only* rational treatment for Stages 0, I and II.

Stage III Hodgkin's may or may not be treated primarily with radiation therapy, depending upon the extent of the disease. If all the known areas of disease can be encompassed within reasonable treatment fields, then radiation therapy is still the treatment of choice. Radiation therapy may be given in conjunction with chemotherapy in many instances.

In Stage IV Hodgkin's disease there is only a low chance of permanent cure due to the widespread involvement of areas which are more radiosensitive than the disease itself. In these cases, chemotherapy is sometimes the primary mode of treatment. It is worthwhile to attempt to palliate symptomatic areas of adenopathy with radiation therapy, often in conjunction with chemotherapy.

A very important factor is an awareness that in many patients the anatomic spread of Hodgkin's disease is fairly predictable. The appreciation of this biologic pattern led Peters<sup>6</sup> to investigate the so-called prophylactic irradiation of groups of lymph nodes contiguous to the clinically involved areas. This understanding of the behavior of Hodgkin's disease and recognition of the need for irradiation with daily intensive doses pro-



vides a reasonable prospect for achieving a substantial cure rate in patients with localized disease.

Prophylactic irradiation is a misnomer, since the therapy is aimed at undetected disease. This is a very important portion of the ultimate adequate treatment of Hodgkin's disease. The high frequency of recurrence of Hodgkin's in lymph nodes clinically uninvolved, but lying adjacent to those with disease, indicates a need for including these nodes in the treatment field (Figure 2).

It is of extreme importance when the primary disease is present in the supraclavicular, cervical, or axillary regions that the clinically uninvolved mediastinum also be treated.

If the lymph nodes are involved in the mediastinum, then it has been our treatment policy, in spite of a negative lymphangiogram, to include the upper abdominal para-aortic lymph node group in the treatment plan. If the lymphangiogram is positive, then it is necessary to treat the entire abdominal lymphatic system, including the para-aortic, iliac and, in some cases, inguinal lymph nodes, as a single lower abdominal mantle.

If the initial presentation of the disease is in the inguinal or iliac areas, then the field should include the abdominal mantle field to the level of the diaphragm. If the para-aortic nodes are involved it is advisable to treat the mediastinum.

It should be pointed out that lymphomas other than Hodgkin's disease are much less frequently localized, but, when they are, an approach similar to that utilized for Hodgkin's disease is justified.

If renal insufficiency or an elevated BUN is present one should proceed very cautiously with the radiation therapy of a large mass of lymphoma tissue. The marked destruction of a large volume of tumor will greatly increase the nitrogen burden on the kidney. We have found it extremely useful to routinely prescribe allopurinol, a structural analog of the natural purine base hypoxanthine. This drug acts on purine catabolism and inhibits production of uric acid by blocking the biochemical reaction immediately preceding uric acid formation. This action low-

ers the serum and urinary uric acid levels, which prevents renal nitrate deposition. The usual dosage is 600 mg/day for three days while increasing the patient's fluid intake.

Regional irradiation is the treatment of choice for Hodgkin's disease. The port should include the known disease in addition to the adjacent, clinically uninvolved areas. The aim of radiation therapy is to deliver a dose of radiation to the entire volume such that regrowth of the tumor within the volume is unlikely. A tissue tumor dose in the range of 4,000 to 4,500 rads in four to six weeks is usually well tolerated and is very rarely followed by local regrowth of tumor. A depth dosage of at least 3,500 rads should be given to adjacent, apparently uninvolved areas. Milton Friedman<sup>7</sup> has reported that tumor dose ranges which encompass the 2,000 to 3,000 rads level in 28 days produce roughly 57 percent local control, whereas 4,000 rads or greater in 28 days or longer produces 96 percent local control.

The role of repeated administration of multiple low doses of radiations is a definite factor in the development of a radiation resistant form of the disease with the ultimate widespread progression of the tumor. Formerly, doses of 1,000 to 2,000 roentgens, quite often as an air dose, were given, producing transient lymph node regression. Such doses, routinely applied, permit frequent regrowth and frequent retreatment is necessary. After several such treatments severe skin changes and other problems limit further radiation therapy, and yet the disease remains uncontrolled even in its original local site.

#### PROGNOSIS

It was mentioned earlier that the histopathological classification has a marked effect on the overall prognosis of Hodgkin's disease. The other obvious factor affecting prognosis is the clinical staging. The following figures were derived from a study by Keller, *et al.*,<sup>2</sup> on 154 patients with Hodgkin's disease. Accurate anatomical staging, all with lymphangiograms, was carried out. The differences in survival at five years in all stages was found to be significant with a *p* of less than .02, indicating excellent statistical correlation.



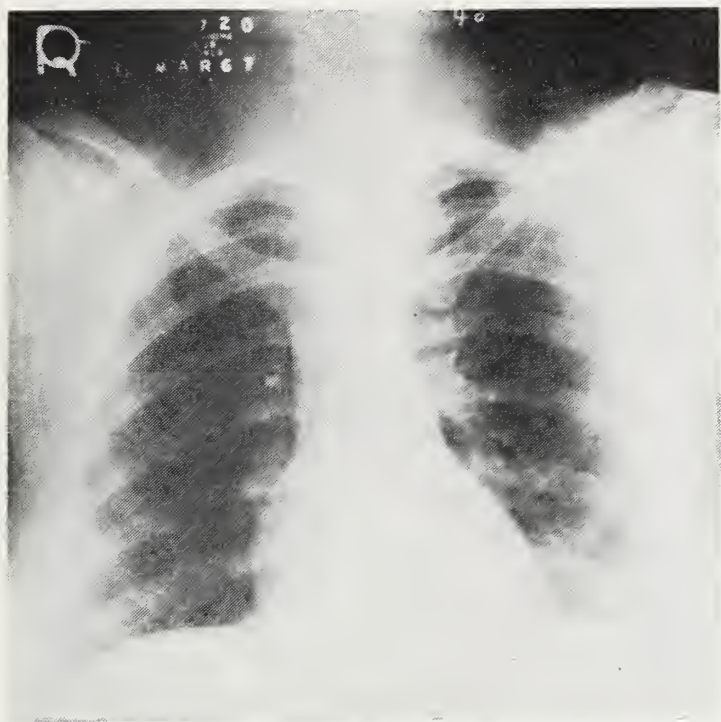


Figure 3. Chest film demonstrating a widened upper mediastinum and soft tissue masses in the neck.

Stage I:	89% five-year
Stage II:	68% five-year
Stage III:	41% five-year
Stage IV:	19% five-year

#### CASE HISTORIES

The following four cases illustrate a number of points which I have attempted to emphasize. These are actual cases treated by radiation therapy at the University of Oklahoma Medical Center. These are four representative cases that have done well following radiation therapy.

*Case #1—S.M.:* 22-year-old white female found to have a mediastinal mass three years prior to being seen at the University of Oklahoma Medical Center. She was operated at that time, and 80 percent of the mass involving the left side of the mediastinum was resected and diagnosed as Hodgkin's disease. The patient was then treated with radiation therapy with 2,700 roentgens air exposure to the mediastinum with 250 KV x-ray. The patient did well until seen at the Center in March of 1967, at which time she had a suprasternal mass with partial respiratory obstruction (Figure 3).

The patient had a nodular mass extending above the sternal notch to the thyroid cartilage and laterally to the midclavicular line on both sides. The mass was firm, lobulated and tender. The patient had respiratory

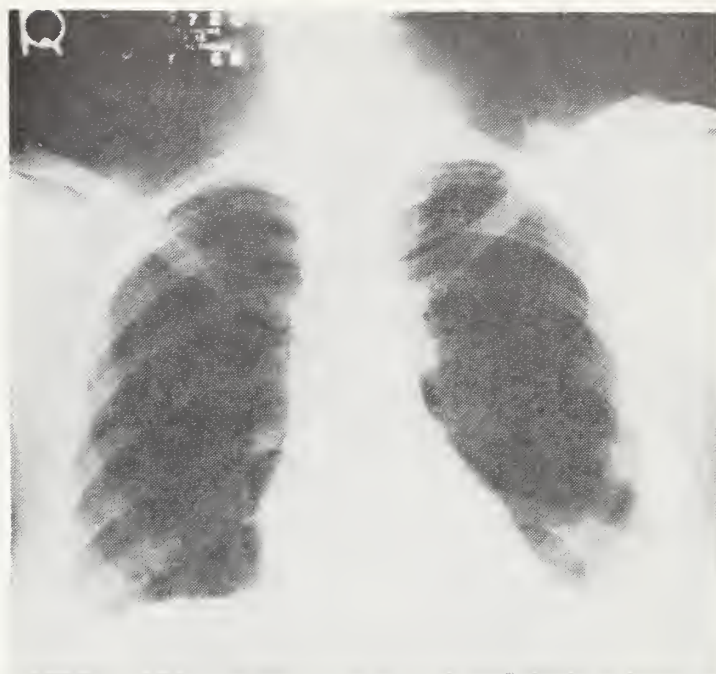


Figure 4. The same case as in figure 3. Film taken at most recent follow-up examination shows a completely normal chest with no evidence of the previous mediastinal widening or lymphadenopathy. This chest film was interpreted as normal.

stridor. Treatment was started on March 29, 1967 to a superior mantle field. This field was completed at 4,500 rads tumor dose on May 24, 1967. The patient had a marked regression of the mediastinal mass.

The lymphangiogram was positive and an inferior mantle field was started on June 5, 1967 and completed on July 19, 1967 with a total of 4,500 rads tumor dose being delivered.

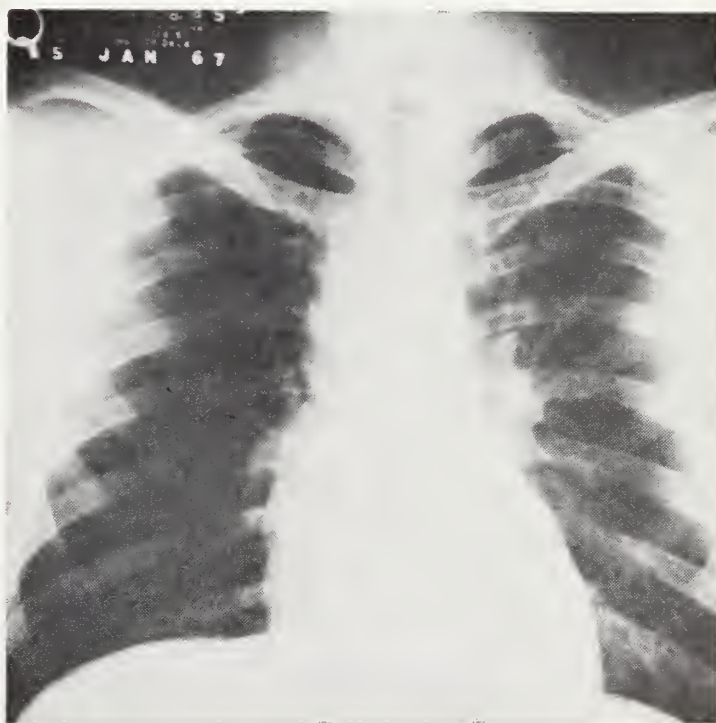


Figure 5. Note the widened upper mediastinum, due to involvement of mediastinal lymph nodes with persistent Hodgkin's disease.





Figure 6. The same case as in figure 5 on his last follow-up visit. Note that the mediastinum is completely normal at the present time and there is no evidence of further adenopathy or residual radiation changes.

It is quite interesting to note that, although the patient must have received some irradiation to her ovaries during the treatment of the lower mantle, her menstrual periods have returned to normal at the present time. We have been seeing her in routine follow-up, and on her last visit in June of 1969 she apparently was free of disease (Figure 4).

*Case #2—D.K.:* 26-year-old white male first seen in March of 1967 complaining of a swelling of the left side of his neck of three weeks duration. A biopsy was performed and reported as Hodgkin's disease, sarcoma type. A chest x-ray showed widening of the mediastinum. No other lymphadenopathy was noted. The lymphangiogram was reported as normal.

A superior mantle field was started on March 3, 1967 and completed on April 12, 1967 with a total of 4,500 rads tumor dose being delivered.

A para-aortic field was then treated to a total of 4,000 rads tumor dose in 20 days.

The patient's chest x-rays have remained

clear since the completion of therapy. He is doing well at the present time with no evidence of recurrent disease.

*Case #3—J. C.:* 20-year-old white male with progressive weakness and weight loss of one-year duration. Six months prior to admission he had a 20 lb. weight loss. Three months prior to admission he was admitted to a hospital in Denver, Colorado. The findings at that time were a left anterior cervical mass, a mediastinal mass, and what was thought to be deviation of the ureters by a retroperitoneal mass. Exploratory laparotomy was performed and resulted in a nephrectomy, with a diagnosis of pyelonephritis, but no tumor was found. Later, a lymphangiogram was normal. A left supraclavicular node biopsy was performed and revealed Hodgkin's disease.

The patient was treated with radiation therapy to the mediastinum and left supraclavicular area, receiving approximately 2,000 roentgens air exposure with 250 KV x-ray.

The patient had symptomatic improvement with a gain in weight and some return of strength and appetite, but with persistent tumor on chest roentgenogram. The patient completed his treatment approximately one month prior to being seen at the University of Oklahoma Medical Center. The patient was referred to us for possible chemother-

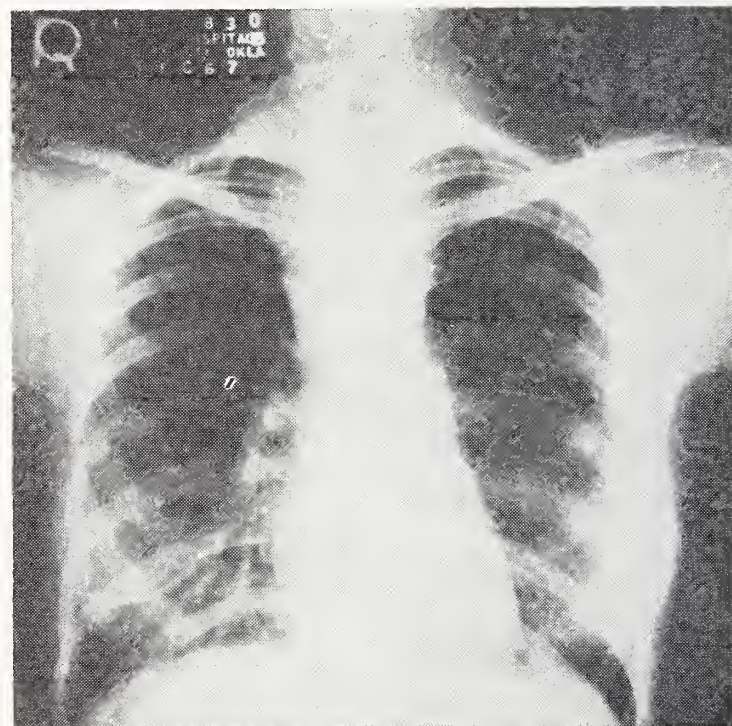


Figure 7. Patient with a markedly widened upper mediastinum with the presentation of a suprasternal swelling mass.



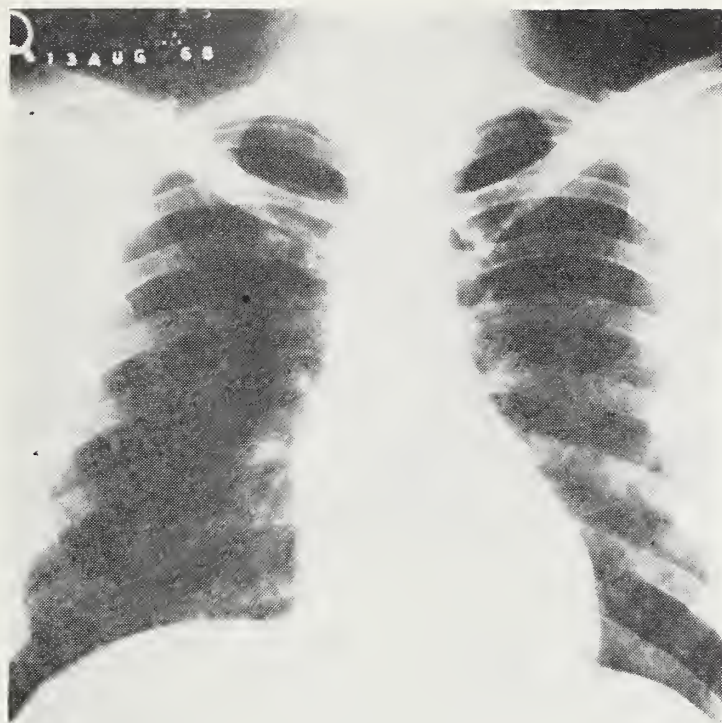


Figure 8. The same patient as in figure 7 following radiation therapy. Note that there has been complete regression of the widened suprasternal and upper mediastinal area. Some residual fibrosis is noted in the lung apices following the irradiation. The patient is doing well at the present time with no evidence of disease.

apy, but we thought it would be advisable to continue his irradiation to what we felt was a more adequate dose (Figure 5).

Treatment was started to a superior mantle field on January 10, 1967 and completed February 27, 1967 with the delivery of an additional 4,000 rads tumor dose.

A para-aortic field was started following this and continued to the end of March 1967 with a total of 4,000 rads tumor dose.

The patient had a marked regression of his lymphadenopathy following completion of this treatment. Chest x-rays have remained normal to the present time and he continues to do well with no evidence of disease (Figure 6).

*Case #4—E.E.:* 18-year-old white female who noted a suprasternal swelling in October of 1967. A biopsy was made of the mass in November of 1967 and was reported as Hodgkin's disease. A chest x-ray showed an anterior superior mediastinal mass (Figure 7). The patient was seen by us in December of 1967, at which time she had several small lymph nodes in the suprasternal notch with a firm mass in this region. No other specific lymphadenopathy was noted.

Treatment was started in December of 1967 to a superior mantle and completed January 31, 1968, with a total of 4,500 rads being delivered.

A para-aortic field was started in February of 1968 and completed in early March of 1968 with a total of 4,000 rads delivered to this field.

The patient has continued to do well following the treatment with no evidence of recurrence of mediastinal adenopathy (Figure 8). She is feeling well and gaining weight and symptomatically is free of disease. □

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## Tumor Board Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.\*

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### CASE No. 15: Carcinoma of the Larynx in a Patient With Chronic Granulocytic Leukemia

**PRESENTATION:** The patient is a 70-year-old white male whose history of illness began in July, 1968, at which time a diagnosis of chronic granulocytic leukemia was

made. Two months later he developed hoarseness and a sore throat. In November, 1968, he was hospitalized elsewhere with anemia. At that time, he had a hematocrit of 14, his hemoglobin was 4 gm%, and he received 11 units of blood. Laryngoscopy revealed a carcinoma of the larynx. He was having a moderate amount of dyspnea at that time and was referred to this hospital.

Physical examination revealed a slightly wasted white male who was in moderate distress with respiratory stridor. The eyes were normal except for bilateral arcus senilis, and the ears were normal. The nasal septum was deviated to the right. The patient had petechiae and purpuric spots throughout the oro-pharynx. He had some small areas of mucosal ulcerations. Examination of the larynx revealed a lesion involving both of his true vocal cords with decreased movement of the cords. The right false vocal cord and the aryepiglottic fold appeared to be involved as well as the right pyriform sinus. He had no masses in his neck. The white blood count was 25,800/mm<sup>3</sup> with a differential of 50 neutrophils, 6 metamyelocytes, 23 bands, 20 lymphocytes, and 1 monocyte. The platelet count was 38,000/mm<sup>3</sup>. The hematocrit was 42% and hemoglobin was 13.3 gm%. The day after his admission, because of increasing respiratory distress, he was given one unit of fresh

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

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frozen plasma (because of a slightly elevated PTT and prothrombin time) and a tracheostomy was performed. He had no particular difficulty with this, especially from a bleeding standpoint. He was scheduled for a laryngoscopy and biopsy of the larynx. His hemoglobin had dropped to 8.6 gm%. On the day before surgery, he was given two units of whole blood and then on the morning of surgery, he was given one unit of platelet-rich plasma. The laryngoscopy and biopsy were carried out without difficulty. He lost no significant amount of blood. The biopsy revealed leukemic infiltration and squamous cell carcinoma of the larynx.

DOCTOR CONDIT: Any questions about the history? I have one question and that is what sort of treatment did he have for his leukemia?

PRESENTER: He was on "Myleran," four mg/day from July 29, 1968, until three weeks ago (approximately three months).

DOCTOR SNOW: The lesion in his larynx involves both true vocal cords?

PRESENTER: At the time we did the direct laryngoscopy, we could not see his true cords because of marked edema. The lesion involved the right side of the epiglottis and extended into the right aryepiglottic fold and into the right pyriform sinus and somewhat upon the right lateral hypopharyngeal wall. Both arytenoids were remarkably swollen. He had a very small opening that you could barely see through and with the bleeding problem that the patient had, we did not force the scope down through his false cords.

DOCTOR CONDIT: Doctor Snow, what are your thoughts about the management of this man?

DOCTOR SNOW: I would think that if it were not for his leukemia, this patient should be treated surgically, but in view of his leukemia, I presume radiation therapy is the treatment of choice.

DOCTOR CONDIT: I have a question about his physical findings. Has anyone ever felt his spleen?

PRESENTER: No.

DOCTOR CONDIT: I would gather that his leukemia is not in very good control and since he has had only "Myleran," we come back to the old question: Which is better

treatment for chronic granulocytic leukemia, radiation therapy to the spleen or "Myleran" initially? We do not really know the answer to this question.

DOCTOR CHANES: Four milligrams of "Myleran" daily for the average chronic granulocytic leukemia patient is sometimes a little too much.

DOCTOR CONDIT: That's right. Even though on this dose his white blood count is 25,800/mm<sup>3</sup>, he is also anemic and thrombocytopenic. Has he been seen by the hematologists?

PRESENTER: Yes.

DOCTOR CONDIT: What did they recommend?

PRESENTER: They recommended that his platelet count and coagulation studies be checked before surgery, and they suggested that donors be available to supply fresh blood for transfusions. That is what we did.

DOCTOR CONDIT: Was a bone marrow examination performed?

PRESENTER: Yes, there was one done here, which was hypocellular with very few megakaryocytes, 3% blasts, 23% neutrophils, 25% metamyelocytes, 35% monocytes, 8.5% promonocytes, and 5% lymphocytes. The diagnosis was chronic granulocytic leukemia with toxic depression due to drug therapy. He is on no therapy for his leukemia at the present time.

DOCTOR CONDIT: Doctor Chanes, what do you think?

DOCTOR CHANES: Probably his bone marrow is depressed by "Myleran." It will take another three or four weeks for this to resolve, but he should soon start producing red cells and platelets.

DOCTOR CONDIT: This is one of the bad features of "Myleran." It has a very long duration of action. It may take longer than one month for the bone marrow to recover. Doctor Snow, if he did not have leukemia, would you say that there is a reasonable chance for control of this lesion by surgery?

DOCTOR SNOW: Yes.

DOCTOR CONDIT: And if his leukemia could be brought under some type of control, would you still be interested in a surgical approach?

DOCTOR SNOW: Well, with your good advice on it, yes. I have never encountered



carcinoma of the larynx in a leukemic patient before, and I really do not know what one is supposed to do under these circumstances.

DOCTOR CONDIT: Chronic granulocytic leukemia may go along for a number of years with appropriate radiation therapy or chemotherapy. We have to be certain that this man is not developing a blastic transformation of his disease, and I gather from the bone marrow and peripheral blood findings that this is not the case. I think that the red cells and platelets are depressed by the "Myleran," but before operating on him, you will have to wait for his bone marrow to recover. This may take a month or two. Another possibility would be to give him platelets and go ahead and operate on him, which I feel would not be advisable. Doctor Bogardus, what do you think?

DOCTOR BOGARDUS: I think the first thing to say is that you cannot possibly predict what his disease is going to do. As Doctor Condit mentioned, he could very well go into a blastic crisis and die before any definitive therapy of his laryngeal lesion could be given. On the other hand, he may live for another year or so. Some definitive form of treatment is going to have to be given for his carcinoma of the larynx. I think that the odds right now are that his leukemia is going to allow him to live longer than his carcinoma of the larynx will, so we are going to have to treat the one that is going to cause him the most trouble. If Doctor Snow does not want to operate him, then the alternative is to treat him with radiation therapy.

DOCTOR CONDIT: In this sort of a lesion, what results can you expect from radiation therapy alone?

DOCTOR BOGARDUS: Not as good as surgical removal.

DOCTOR CHANES: What do you think about treating his lesion with radiation therapy until the bone marrow recovers, and then consider surgery?

DOCTOR CONDIT: Pre-operative radiation?

DOCTOR CHANES: Yes.

DOCTOR CONDIT: Isn't this one of your studies at the moment?

DOCTOR SNOW: Yes, but I think that

we can omit him from the protocol because of his leukemia. I wonder if the thing to do would be to begin radiation therapy as if one were going to give it in a conventional manner for a cure, and if at any point during this treatment he does recover sufficiently as far as his bone marrow is concerned, then we could either interrupt the radiation therapy and operate, or wait until it is completed and then wait another six weeks and follow through with surgery.

DOCTOR CONDIT: I think that this would give us time to find out what his leukemia is going to do, which is the big question at the moment. Do you concur, Doctor Bogardus?

DOCTOR BOGARDUS: Another alternative that I was thinking of in this particular patient is to give him a total of three split courses of radiation therapy. He would finish in a period of nine weeks with a total of 6,000 rads, but it would have been given in three consecutive rounds. In other words, we could treat him for one week, then stop treatment for three weeks, and let everybody else work on his leukemia, then bring him back and treat him for one more week. At any point along the line therapy could be interrupted and he could be operated. This would have the advantage of protracting the radiation therapy a little longer, but tying him up for a shorter period of time and giving us an opportunity to treat his leukemia between courses of radiation. I think all in all this might be the best way to approach the problem, and still this would be a curative attempt whether he was operated on or not.

DOCTOR CONDIT: Would you care to comment on the possible effects of radiation to the larynx on the leukemia?

DOCTOR BOGARDUS: It may very well have a very interesting effect on his leukemic infiltrates. Occasionally we treat a joint or some other localized lesion, and observe that the leukemic patient will improve generally. Although this lesion is not a direct infiltrate, treatment of his larynx may very well bring his leukemia under somewhat better control. This would not be at all unusual.

DOCTOR CONDIT: Is this satisfactory with you, Doctor Snow?

DOCTOR SNOW: Yes. Do I understand



that this would be approximately 2,000 rads given over a period of one week, and repeated again in the fifth week, and then again in the ninth week?

DOCTOR BOGARDUS: That's right. We have been using this method in carcinoma of the lung. Most of our lung cancers are treated with only two courses, separated by a three week interval. These patients do remarkably well and some of them, if they have a lesion that is far enough away from critical structures such as the spinal cord, have been given a third course of treatment. This third course gets them up to a high enough dosage which, given in this rapid split fashion, is as effective or even more effective than giving them a protracted single course of radiation therapy.

DOCTOR SNOW: Now, tell me what advantage there is in this particular patient in using this form of treatment as opposed to fractionated therapy over a six to eight week period.

DOCTOR BOGARDUS: The advantage, as I see it, is that we can give him the first course of therapy which would last for one week, and meanwhile his bone marrow would be recovering and his leukemia could be evaluated, because we would not be treating him and if his lesion is responding in three weeks, we can treat him again. If some place along the line he improved sufficiently from the standpoint of his leukemia that you would want to operate him, then we have at least three different points where we could stop and you could operate.

DOCTOR CONDIT: And then you could pick up post-operatively?

DOCTOR BOGARDUS: That's right.

*FINAL DIAGNOSIS:* Squamous cell carcinoma of the larynx in a patient with chronic granulocytic leukemia.

*TUMOR CLINIC RECOMMENDATIONS:* It was recommended that the patient be treated with a split course of radiation therapy to be given as five days of therapy at three week intervals to a total dose of 6,000 rads. If at any time during this treatment the patient's bone marrow depression had improved sufficiently to allow surgery, a laryngectomy would be performed.

CASE No. 16: Squamous Cell Carcinoma of

the Larynx With Metastases to the Lung or Primary Lung Cancer

*PRESENTATION:* The patient is a 75-year-old male retired laborer. In May, 1967, he had a laryngectomy and left neck dissection for carcinoma of the larynx. In September, 1967, he had a right neck dissection for metastasis in the right neck. Approximately six months ago he noted the appearance of a discrete 1.5 x 1.5 cm nodule behind the angle of the mandible on the right. This mass has not changed in size, has not become fixed and is non-tender. In February, 1969, he developed right chest pain. A chest x-ray at that time revealed some pleural thickening and pleural effusion on the right, slight elevation of the right diaphragm, and a suggestion of fullness of the right hilum. An x-ray a month later showed slight enlargement of the hilar mass, and a suggestion of a mass in the right lower lobe of the lung and additional pleural effusion. The patient was admitted for study of this lesion. A thoracentesis was performed and 200 cc of blood-tinged fluid was obtained. The cytology report is not available as yet. He was bronchoscoped at that time and purulent sputum was seen throughout the tracheo-bronchial tree. The right lower lobe bronchus was seen to be compressed. The bronchoscope could not be passed beyond the compression. No endobronchial pathology was found other than the evidence of infection.

On examination now the neck incisions are all well-healed. His pharynx and stoma are negative for persistent tumor. He has the 1.5 x 1.5 cm mass behind the angle of the right mandible which is movable and non-tender, and when he was admitted he had decreased breath sounds and dullness to percussion on the right. The case is presented to the Tumor Board for recommendations for therapy of the lung lesions.

DOCTOR CONDIT: Doctor Chanes, what do you think about the further management of this patient?

DOCTOR CHANES: It would probably be of some interest to do some tomograms of the lung lesion and see if there is any evidence that this could be a second primary. It seems to me that the small lesions that were seen in June, and in retrospect now, could be metastatic too. In terms of chemo-



therapy, I think that it would make a difference if this were a primary lesion of the lung. The chemotherapy that we use for primary cancer of the lung would not work for metastatic lesions from the laryngeal lesion. I do not know if we would be sure even with the tomograms.

DOCTOR CONDIT: Doctor Bogardus, what do you think about that?

DOCTOR BOGARDUS: It looks to me like this is probably a second primary lesion of the lung.

DOCTOR CONDIT: You think this is a hilar lesion with metastases to the right lower lobe?

DOCTOR BOGARDUS: In hilar lesions this is very often seen. I would imagine that if you kept repeating the sputum cytology, you would eventually get a positive one.

DOCTOR CONDIT: Doctor Snow, do you have a question?

DOCTOR SNOW: Are you saying that this is a hilar lesion? In spite of the negative bronchoscopy?

DOCTOR BOGARDUS: There could be positive nodes in the hilum. I have seen lesions presenting with nodes in the hilum, but early bronchoscopy showed nothing.

DOCTOR JOEL: Could this be atelectasis?

DOCTOR BOGARDUS: This is a possibility too. I think that there is a malignancy; whether it is a primary hilar lesion or a peripheral lesion with hilar metastases, is anybody's guess.

DOCTOR JOEL: Does he smoke?

PRESENTER: He did until his surgery in September, 1967.

DOCTOR CONDIT: So, he has actually been free of local recurrence since September, 1967, whatever that means?

PRESENTER: Except for the mass at the angle of the mandible on the right.

DOCTOR CONDIT: What do you think this is, Doctor Snow?

DOCTOR SNOW: I think it is tumor.

DOCTOR CONDIT: I agree.

DOCTOR BOGARDUS: This man has two possible courses of therapy. He can be treated with either radiation therapy or chemotherapy at this point. His lung lesions would be quite amenable to a rapid split

course of radiation therapy, and chemotherapy could be saved until it was needed later.

DOCTOR CONDIT: Doctor Joel, if you had these lesions under a microscope, could you tell whether it was primary or metastatic from the larynx?

DOCTOR JOEL: No, absolutely not.

DOCTOR CONDIT: Doctor Bogardus, would you be interested in treating him for palliation as if he had metastases from the larynx?

DOCTOR BOGARDUS: I would treat him as if he had a primary lesion of the lung. It is the same field and same course of treatment, it is only what you write down. I would really like to see a cytology report on this lesion. I do not know if you can get one. If the bronchial washings are negative, you might try sputum collections for a few days.

DOCTOR SNOW: Our assumption has been that this lesion is metastatic. We have uncontrolled metastases in the neck and he has had a pleural effusion. If this is primary, I doubt that the thoracic surgeons would advise resection, but they should be consulted.

DOCTOR CONDIT: The palliation of lung cancer has improved recently with the combination of split dose radiation therapy and chemotherapy with actinomycin D and vincristine. Some patients are free of disease more than one year later.

DOCTOR BOGARDUS: I think that the average patient with squamous cell carcinoma of the lung who is in reasonably good health otherwise can expect at least a full year of palliation and many of them die from distant metastases without recurrence of the primary lesion. I think this is a very important consideration.

DOCTOR CONDIT: You are talking about just radiation now?

DOCTOR BOGARDUS: I am talking about just radiation alone, and with the drug combination I am sure the results are going to be even better. With just radiation therapy alone, the majority of the patients die from brain or liver metastases and do not die of their primary lung lesion, which is usually controlled. We also can treat localized metastases to the lung. These are treated with small fields right over the lesion to a high dosage. It destroys the lung



in the immediate area, but it generally controls the metastases. There is a limit as to how extensively you can do this, but it is certainly a worthwhile consideration.

DOCTOR CONDIT: If I can summarize then, I gather that everybody feels that it is desirable to have a thoracic surgery consultation, and unless they come up with something radically different, the patient should receive palliative radiation therapy and chemotherapy should be reserved for some later date when it might be needed. When that time comes, it will be difficult to decide which drug to use because bronchogenic carcinoma should be treated with actinomycin D and vincristine, and squamous cell carcinoma of the larynx would be more likely to respond to "Methotrexate."

DOCTOR SNOW: Doctor Bogardus, if you treated him with radiation to the lung, would you also treat this mass in his neck?

DOCTOR BOGARDUS: I see no reason not to.

DOCTOR CONDIT: He has never had radiation therapy to his neck?

PRESENTER: No.

DOCTOR BOGARDUS: I would treat only the local area of the lesion. I would not treat anything else, but I would treat it at the same time as the lung lesion.

*FINAL DIAGNOSIS:* Squamous cell carcinoma of the larynx metastatic to the neck with either a second primary in the lung or pulmonary metastases from the carcinoma of the larynx.

*TUMOR CLINIC RECOMMENDATIONS:* Thoracic surgery consultation, radiation therapy to the recurrence in the neck and the lung lesion, and at a later date the patient may be treated with either "Methotrexate" or actinomycin D and vincristine. □

## OKLAHOMA AND ARKANSAS INTERNISTS TO HOLD SCIENTIFIC MEETING

Specialists in internal medicine in Oklahoma and Arkansas will hold a scientific meeting in Hot Springs, Arkansas, September 13th, under the auspices of the American College of Physicians.

The session is one of 35 regional scientific-educational meetings the ACP will sponsor during the 1969-70 academic year.

Special guest at the meeting will be Samuel P. Asper, M.D., Baltimore, Maryland, ACP President and Professor of Medicine at Johns Hopkins University School of Medicine.

The meeting is under the general direction of Jerome S. Levy, M.D., Little Rock, Arkansas, ACP Governor for Arkansas and Clinical Professor of Medicine, University of Arkansas School of Medicine. William W. Rucks, M.D., Oklahoma City, Professor of Clinical Medicine, University of Oklahoma School of Medicine, is ACP Governor for Oklahoma. □



## Oklahoma's Medical Advisory Committee for Driver Licensing

R. LEROY CARPENTER, M.D.  
MARVIN K. MARGO, M.D.

*Highway fatalities and accidents have reached epidemic proportions. Oklahoma physicians are playing a key role in medically evaluating patient's abilities to drive vehicles safely.*

**D**RIVERS, the frequently overlooked third party of the transportation triangle, are now receiving special consideration in Oklahoma.

During the first session of Oklahoma's 31st Legislature, House Bill 807 was passed establishing the Medical Advisory Committee on Driver Licensing to act as a body of medical consultants to the Commissioner of Public Safety. The committee's primary objectives are to evaluate medical reports of drivers with physical or mental conditions which may affect their ability to drive, and to advise the State Department of Public Safety on minimum physical and mental standards.

Prior to the creation of the Medical Advisory Committee, the driver's license administrators had been at a disadvantage in determining the physical fitness of the individual operating a motor vehicle. The statute was written to insure that the driver with a medical condition which would have caused automatic withdrawal of his license

under previous standards, would have a method for consideration if compensating factors were present. Thus, the act became a means to aid those who would have previously lost their license, and it eliminated what many, particularly the elderly, thought was a threat to their driving privilege.

As a result of activities of the Medical Advisory Committee during 1968 some individuals previously denied the privilege to drive by the Department of Public Safety have been permitted to drive with restrictions imposed upon the type, time, location, etc.

During the first 12 months of operation, the Medical Advisory Committee reviewed 404 cases with the disposition as shown in table 1. Of the 309 licenses granted, 59 were with restrictions tailored to the individual's condition.

Table 1  
Cases Reviewed by Medical Advisory Board, 1968

Clinical Diagnosis	Male	Female	Granted	Denied	Total
Alcoholism	42	6	29	19	48
Cardiac and Circulatory	32	12	34	10	44
Diabetes	43	29	62	10	72
Drugs	2	0	1	1	2
Epilepsy	50	25	59	16	75
Other Neurological Disorders	61	31	65	27	92
Vision Defects	10	13	20	3	23
Psychiatric and Miscellaneous	31	17	39	9	48
<b>TOTALS</b>	<b>271</b>	<b>133</b>	<b>309</b>	<b>95</b>	<b>404</b>

Membership of the committee is required by law to include an internist, a vision spe-



cialist, an orthopedic surgeon, a medical neurologist and a psychiatrist, and other physicians, to complete the seven member board. Presently, these additional appointments are held by a general practitioner and a neurosurgeon.

Thus, for the first time in Oklahoma, the Department of Public Safety has access to an organized group of physicians, which provides medical guidance in an attempt to curtail the rising death rate from automobile accidents. The act also provides that Medical Advisory Committee members will not be held liable for their opinions and recommendations, giving a measure of protection from harassment and possible litigation. Recommendations made by the committee are transmitted to the Department of Public Safety as an official opinion on drivers whose records have been referred to the committee for review. Any medical opinion provided the Department of Public Safety is not binding in determining the disposition of an individual's license. The Commissioner of Public Safety is responsible for making that final decision.

Individual members of the Medical Advisory Committee are not revealed to the public and they do not see personally any of the individuals under consideration. The review process is carried out through an executive secretary, who screens records submitted by the Department of Public Safety. When necessary, he refers records to the

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*R. LeRoy Carpenter, M.D., graduated from the University of Kansas School of Medicine in 1956 and is currently Chief of the Personal Health Services at the Oklahoma State Health Department. His major research interest is in epidemiology. He is a member of the American Public Health Association, the American Thoracic Society and the United States-Mexico Border Health Association.*

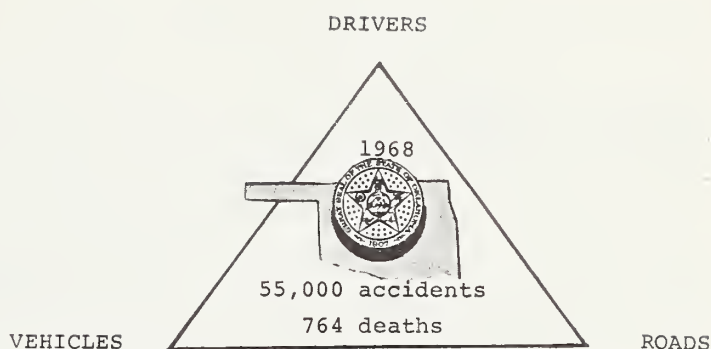


Figure 1. The Transportation Triangle: Drivers, Vehicles and Roads.

committee as a whole, or to individual members for further consideration. During any phase of this procedure, the individual being reviewed may be requested to supply additional medical information at his own expense, from his own physician or a specialist of his own selection.

It should be understood that supplemental medical information is provided at the discretion of the individual; however, failure to meet the request allows the Commissioner of Public Safety to cancel or deny his license for an indefinite period of time. The person under review may submit the requested information for reinstatement of his license at any time.

Such medical advisory committees are not new in the country, nor do they all function as does the Oklahoma Committee. The Federal Highway Safety Act has had the effect of rapidly increasing the number of these committees. Over half of the states now have committees, or have enacted legislation to establish them. Most of the committees rely heavily on the American Medical Association guidelines for determining driver limitation.

Oklahoma's committee is patterned after that of Kentucky, which uses similar procedures previously described and develops minimal medical standards for the Department of Public Safety. In Oregon, physicians on the staff of the State Department of Health carry out this responsibility. In Maryland, the Medical Advisory Committee meets monthly and requires persons whose licenses are being considered for revocation to appear in person.

The number of cases reviewed by these committees is quite revealing as to the need for such medical guidance. Kentucky, one of the first states to initiate this program, experienced a tenfold increase in its cases in



the first three years. Other states reflect similar increases. During eleven of the first twelve months of the committee's function in Oklahoma, the number of cases reviewed progressively increased. At the time of this writing, cases are referred to the Medical Advisory Committee at a rate of 70 per month or over twice the 1968 average.

The majority of cases that come to the committee's attention are referred by driver's license examiners who notice the applicant has answered yes to the routine question regarding known physical or mental disabilities. Other cases are referred by enforcement officers, courts and family members. Only seven (7) out of the 404 cases in 1968 were referred by private physicians.

In summary, a Medical Advisory Committee to the Department of Public Safety created by state statute has been working for over a year. Experience has revealed that a large number of persons heretofore unable to be licensed due to physical disabilities has been able to retain driving privileges with certain restrictions and periodic med-

ical re-evaluations by physicians of their own selection.

There is a need for private practitioners to keep in mind the potential driving hazards in their patients with certain physical and emotional conditions and to collaborate with the Medical Advisory Committee of the Department of Public Safety whenever appropriate.

#### ACKNOWLEDGEMENT

The authors wish to express their gratitude to Mr. Ed Wehling of the Driver Improvement Bureau of the Department of Public Safety for his continued valuable guidance to the Medical Advisory Committee, and to the members of the Medical Advisory Committee for their numerous hours of work for which they receive no financial compensation.

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- 47 O.S. Supp. 1968, s 6—118 et seq.

### ATOKA-BRYAN-COAL COUNTIES MEDICAL AUXILIARY RECEIVES FOUNDATION AWARD

The Woman's Auxiliary to the Atoka-Bryan-Coal Counties Medical Society received an award of merit for its outstanding efforts in the AMA Education and Research Foundation Program for 1968-69. The presentation was made on July 14th during the auxiliary's Forty-Sixth Annual Convention being held in the Waldorf-Astoria Hotel in New York City.

The Atoka-Bryan-Coal Counties Auxiliary has the largest per capita contribution of all constituent auxiliaries.

The national auxiliary's contribution to AMA-ERF totaled \$428,875.77, which will be given to the Institute for Bio-Medical Research and to the medical schools for unrestricted use. □



## New Peer Review Adopted by Board

The OSMA Board of Trustees by mail ballot has adopted a new organization and procedure for the OSMA Medical Insurance Review Committee. The new organization calls for a central committee to hear all medical insurance claims that are being questioned by carriers or physicians.

In a letter to the Board of Trustees, President Hillard E. Denyer, M.D., said that recent publicity regarding payment to physicians under Medicaid had prompted an analysis of the procedure for rendering judgment on questioned claims. Denyer said, "This is not to say that we are concerned at this moment about physician-abuse of Medicaid or Medicare, but we do feel that our 'peer review' mechanism could be streamlined for a more expeditious processing of such matters."

Some state newspapers had been questioning the effectiveness of controls set up to assure the judicious use of public funds, and the Medical Advisory Committee to the Department of Public Welfare appointed a three-physician team to meet with the OSMA representatives to see what improvements could be made. The change in the claims review system was an outgrowth of this meeting.

The committee found that the OSMA's claims review system was often unduly slow in providing a decision on a problem case. It was felt that this could be expedited by a more or less centralized authority for claims review in the form of a broadly representative OSMA committee which would meet monthly. However, it was also felt that county medical society review committees should continue to be encouraged to make recommendations on cases involving their members.

The committee also found that car-

rier misunderstanding and inadequate communications had contributed to delays, confusion, and direct conflict in the administration of the previous review plan.

The new procedure calls for the creation of a central committee of 20 members plus a chairman and vice-chairman. The committee will then be broken into sub-committees consisting of ten members and a chairman for each. The sub-committees will then meet on alternate months to hear pending cases.

The claims review procedure is limited to those insurance claims which offer payment on a customary and reasonable fee basis. The insurance carrier, the patient, or the physician has the right to bring a complaint to the committee. The sub-committee hearing the complaint shall have the obligation of finding in favor or against the amount of a charge or the quantity and/or medical necessity of the services provided.

If the decision of the sub-committee is in specific or general support of the allegations brought against a physician, it has the obligation of recommending a reasonable settlement.

Mark D. Holcomb, M.D., Chairman of the OSMA Committee, stated, "The insurance review committee is not a disciplinary body. The request for review of a claim by an insurance company or a physician implies no wrong doing on the part of anyone."

Doctor Holcomb pointed out that the new procedure will allow a questioned claim to be adjudicated within 15 to 45 days. The 15-day minimum will give the OSMA Executive Staff time to notify all parties concerned that a review is in process and the 45-day maximum will assure the insurance carriers that their payment

records will be reasonably current even on complicated cases.

"The purpose of the new organization is not to disenfranchise the county medical society committees," Doctor Holcomb said. "The new procedure calls for all cases to be referred to the appropriate county society review committee and such committees are invited to submit their opinions on the case to the state central committee. The state committee will hear all cases, but the opinions received from local committees will be given great weight.

In hearing cases, the state committee will invite the physician, the carrier, and the county society review committee to meet with them to consider the case. All persons may appear in person or may correspond with the OSMA group.

The organizational meeting of the central committee was held on Sunday, July 27th, and the two sub-committees were appointed. In addition, Howard B. Keith, M.D., Shattuck, was named Vice-Chairman of the central committee and will serve as chairman of one of the sub-committees while Doctor Holcomb will serve as chairman of the other.

At the organizational meeting, where representatives of the governmental carriers were present, it was made quite clear that the OSMA expected its rulings on questioned cases to be honored. □

## Specialties Confer For "A United Profession"

Representatives from 14 specialty societies heard Doctor Hillard A. Denyer, M.D., OSMA President, call for a unified profession during his opening remarks at a conference for specialty society and OSMA representatives. Held June 29th, the purpose of the conference was to bring together the various medical disciplines and to discuss innovative ways in which the medical associa-



tion could be a more viable organization for the state medical interests.

Using discussion group techniques, the conference took the form of four workshops divided in a manner that provided representation from various specialty organizations. A member of the OSMA Planning Committee, an officer, or a member of the AMA delegation acted as presiding or recording officer for each group.

A series of eight situational questions was submitted to each group for their consideration and comments. The following is a compilation of the answer each group gave to each question.

#### Questions and Answers

**Should the special interest medical societies be provided with representation in the OSMA House of Delegates?**

The four groups were evenly divided, two in favor and two against this proposition. The two in favor stated that although some representation already existed, it was felt that each society should be represented but without overlapping, e.g., The American College of Physicians and the Oklahoma Society of Internal Medicine should have only one representative. The two groups answering no to the question said that the county societies were a proper forum for specialty societies to be heard and become informed. While the specialty societies should feel free to introduce resolutions for OSMA consideration, the House of Delegates is a policy making body and must represent medicine in general. One group felt that "no real inequities in representation in the house exist now. Any member can be heard in reference committees or on the floor of the house with permission of the speaker. We need to advise our members of how they can be heard at reference committees and in the House of Delegates."

An alternate proposal to the question was recommended. It was that an advisory committee consisting of representatives of each specialty group, selected by the specialty, be created. They would be advisors to the House of Delegates, Board of

Trustees, the President or anyone who needs their services. This group would receive the same communications as the OSMA Councils or Committees receive in order to be better informed and have an opportunity to speak on behalf of their specialty. The advisory committee would be limited to recognized board certified specialty groups, but could also include other groups and the GP group, desired by the OSMA President.

**Should formal liaison with special interest medical societies be established between the OSMA Council on Public Policy and the OSMA State Legislative Committee regarding policy development on national and state legislative issues?**

All four groups felt that formal liaison was desirable. Two groups felt that liaison through the Council on Public Policy would be sufficient while the other two recommended specialty representation in the House of Delegates or the Advisory Committee mentioned above to accomplish the same goal.

**Should the OSMA provide staff service to those special interest societies desiring it and, if so, under what terms and arrangements?**

The general consensus of opinion was that the service was needed and that it was a proper function of the state medical association. It was recommended that this service be extended to certain medical service groups who are employed by M.D.'s and that payment for such service be on a cost basis. (Each specialty group was asked to fill out a questionnaire regarding their interest in this proposition and to approximate the amount of work they might desire.)

**What current and long-range issues of a general nature should receive priority attention by the OSMA and its membership as a whole? What problems or priorities of special-interest to medical societies should be considered in programming of OSMA activities?**

Each group gave a separate answer to this question. One group recommended that each medical specialty society be given a section in the OSMA annual meeting. An-

other preferred not to comment while a third stated that the eight discussion questions submitted at this conference should receive top priority. One group listed three priorities as being: 1.) Problems of the specialty societies in the area of legislation, 2.) Medical education at all levels including public relations, and 3.) Public relations.

**How can the scientific programming for the annual meeting be improved to attract more widespread interest and attendance from the special interest societies?**

Two discussion groups recommended that the annual meeting include more socio-economic presentations. It was also recommended that there be a general interest section that would include several medical disciplines. Another group stated that the scientific portion of the annual meeting should be scheduled in such a way as to not conflict with the meeting of the House of Delegates and that consideration be given to decreasing the number of statewide meetings for medical groups.

**Should a more formalized program be developed to solicit nominees from special interest societies regarding the appointment of OSMA Councils and Committees?**

In answer to this question, three of the discussion groups felt that the present system of appointments was working well and that there should be no change. One group felt the specialty presidents should be encouraged to take the initiative in recommending the appointment of members of their groups to councils and committees and another thought that the president of the specialty society should be consulted for nominees.

**Would it be feasible to attempt a redistricting of small county medical societies into regional groups sufficiently large to employ a part-time staff and to establish a central office?**

Three of the discussion groups felt that this would be a good idea and offered suggestions on how and why it might work. One group felt that if the "staff help" program mentioned above is accomplished, it



could be extended to the county societies.

**Should an annual meeting be held between OSMA officials and representatives of special-interest societies to share views regarding such topics as relationships with government, legislation, long-range planning on problems and projects of common interest?**

Three of the groups felt that this would be worthwhile and one of them stated that if there was specialty society representation in the House of Delegates, a formal meeting might not be necessary. It was recommended that such a meeting, if held, might take place in conjunction with the OSMA annual meeting or there might be a conclave of committees and the specialty meeting be held in conjunction with that. The conclave of committees would be a meeting of all OSMA councils and committees on the same day.

#### Conference Summary

Scott Hendren, M.D., Chairman of the Committee on Planning, summarized the days meeting by stating, "the problem is understanding each other . . . our theme for this conference could well be 'physician, know thyself'."

In his summary, Doctor Hendren pointed out that the medical profession needs to establish a more effective means of communication both internally and externally. He said, "communications within our profession first, and communications of our profession with the rest of society . . . this is our single biggest challenge."

"There is no doubt," Hendren said, "that medicine is a changing entity, that change has come upon us somewhat more rapidly than some of us can assimilate. This is the basis of some of our confusion."

Doctor Hendren closed his summary by saying, "it is true that in these times, most of the energies of your association have been directed toward meeting crises. This will not change because crises are not going away, but the development of a progressive program of goals for the association cannot give way to just fighting brush fires." □

## Journal Copy Deadlines

To enable all contributors to have their work published as soon as possible after submission, *The Journal* is announcing deadlines for copy.

Editorial, scientific and book review copy should be in *The Journal* office six weeks preceding the month of publication (i.e. copy for the October issue will have to be received by August 15th).

Advertising copy is to be in *The Journal* office no later than the 15th of the month preceding the month of publication.

News items and miscellaneous advertisements are due in *The Journal* office by the first of the month of publication.

Mailing address for *The Journal* is P.O. Box 18696, Oklahoma City 73118.

## Hospital Lien Act Useful Tool in Emergency Cases

A new law offering hospitals the opportunity to file claims for the payment of debts arising out of emergency care, was passed during the last session of the Oklahoma Legislature.

The bill provides that parties liable to the patient for damages as a result of the accident and his injuries have an obligation to the hospital if they are properly notified.

The collection for services rendered to emergency patients has long been a problem to hospitals in Oklahoma, particularly those patients traveling through the state. Prior to the new law, a person receiving compensation for injuries requiring emergency care had only a moral obligation to pay his hospital bill; however, the new law will require that monies received will be used to retire or reduce the hospital debt. Insurance companies, and others liable to the injured party, will have an obligation to satisfy the lien rather than pay the full sum to the patient.

Mechanics of utilizing the law requires that a written notice of the claim " . . . containing an itemized statement of the amount claimed,

the name and address of the injured person, the date of the accident, the name and location of the hospital, and the name of the person or persons, firm or firms, corporation or corporations alleged to be liable . . . be filed in . . . district court for the county in which such hospital is located . . ."

Other provisions of the law make the lien secondary to any obligation owed to an attorney retained to represent the patient and requires that the claim must be filed prior to the disbursement of any funds to the patient.

The Oklahoma Hospital Association plans to discuss the details and mechanics of the law at district meetings. □

## Wage-Hour Law Affects Teens Too

In 1966, hospitals were hit with Medicare and new wage/hour law. They are still staggering under the impact of both. Another group affected by the wage/hour law is the nation's job-hunting teenagers.

A recent survey conducted by the National Federation of Independent Business revealed that prior to 1966, approximately 38 percent of all small business firms employed teenagers. Now, less than 15 percent do so. This represents the loss of approximately 750,000 jobs for teenagers.

Most of the small businesses give the same reason for no longer employing teenagers . . . the wage/hour law. Although pundits and politicians verbally wring hands over the so-called generation gap, it appears that the force of government is being employed to widen this gap. Apparently Horatio Alger is dead. He was apparently killed in 1966 by the United States Congress. □

While psychiatrists, sociologists, and federal "planners" are telling us that we need to keep our teenagers off the street and keep them productively occupied, our Congress is busy passing a law which prevents them from getting jobs. Perhaps now some creative bureaucrat can explain why the wage-hour law does not affect the number of jobs available to teenagers. □



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## Emergency Systems Studied in Tulsa

An area-wide emergency medical service system is being devised to involve 21 counties in Tulsa's medical service area. The program is being sponsored by the American College of Surgeons' Committee on Trauma, Oklahoma Chapter.

Co-ordinator for the project is C. T. Thompson, M.D., Tulsa surgeon, State Chairman of the ACS Committee. He is working with Walter Whitlow, a native Tulsan, who recently returned to the state after holding several out of state medically related positions.

Doctor Thompson said, "Several people in Tulsa have been dabbling at the elements of improving medical emergency services — hospitals, police and the health department. We hope to tie all these together into one program of comprehensive medical service on an area-wide basis." Whitlow is developing this system and explained, "What we want to do is develop an economically feasible system in order to save a life . . . by co-ordinating existing services and upgrading to a feasible point, we can provide better care."

The key elements of area-wide effective emergency services are trained personnel, adequate two-way communications and well-equipped vehicles, Whitlow said. During the next six months, he will be researching the feasibility of a 160-hour training course yielding a specialized emergency medical technician, a 72-hour training course for ambulance personnel, and gathering information on emergency services in Northeastern Oklahoma to develop a united plan. □

## Business Seminar Planned For Med Students

Two OSMA committees are co-operating to plan a seminar on the business aspects of medical practice for junior and senior medical students at the O.U. School of Medicine.

The Public Relations Committee, chaired by Doctor James B. Eskridge, III, and the Medical School Liaison Committee, chaired by C. Riley Strong, M.D., held a joint

meeting in late July to begin preliminary planning on the project. A date for the seminar was tentatively set for October or November.

The purpose of the seminar will be to familiarize medical students, along with interns and residents, with the business aspects of starting a medical practice. Topics to be discussed will include association membership, insurance, fee mechanisms, professional liability and malpractice prevention, government health care programs, medical ethics, hospital relations, starting a practice, and other subjects related to professional practice. If each topic is covered adequately by a local expert, the seminar will probably take two days to complete.

In order to reach the maximum number of interested people, the seminar will be offered twice. In this way, those students in preceptor training or those interns or residents that are on duty will have a later opportunity to receive the same information.

The curriculum for the seminar is being planned in cooperation with the students themselves. Doctor Eskridge said, "It is our purpose to make this seminar of value to the students, and not just of interest to ourselves." □

## Mrs. Forester Named Committee Chairman

Mrs. Virgil Ray Forester, Oklahoma City, was named to a second term as Philanthropy Chairman for the AMA Woman's Auxiliary. The announcement was made during the auxiliary's Forty-Sixth Annual Convention held in New York City during July.

Since 1962, Mrs. Forester has been serving as a National Director and as Volunteer Friendly Visitor Chairman, Safety-Disaster Preparedness Chairman, and Liaison to the Woman's Auxiliary to the Student American Medical Association.

Active in state and county auxiliaries for some 17 years, Mrs. Forester was Oklahoma State Auxiliary President in 1960-61. Currently, she is President of the Women's Auxiliary to the Southern Medical Association. □

## Medical Center Announces Fall PG Course

The University of Oklahoma Medical Center has finalized plans for the first fall postgraduate course. Topic for the four-hour short course will be "Diagnostic Aids for the Surgeon" which will be held at the Faculty House, 601 N.W. 14th Street, Oklahoma City, on September 10th.

Registration and luncheon will be held at 11:30 a.m. with the first presentation at 12:10 p.m.

The faculty for this course will be John Schilling, M.D., Professor and Head of the Department of Surgery; Eugene Durso, M.D., Associate Professor, Department of Radiology; Ben Heller, M.D., Professor and Head, Department of Laboratory Medicine; Carl Smith, M.D., Associate Professor, Departments of Medicine and Radiology; Robert Olson, M.D., Assistant Professor, Department of Dermatology;

Boyd Lester, M.D., Associate Professor, Department of Psychiatry; William Hawley, M.D., Clinical Instructor, Department of Surgery; Lazar Greenfield, M.D., Associate Professor, Department of Surgery; and Ide Smith, M.D., Associate Professor, Department of Surgery, all of the OU Medical Center.

Advanced registration, \$12.50, may be mailed to the Office of Post-graduation, University of Oklahoma Medical Center. □

## Food Supervisors' Conference To Convene In Norman

The Fourteenth Annual Food Service Supervisors' Conference will be held October 1st, 2nd, and 3rd at the Kellogg Center in Norman.

The conference is specifically geared as an educational benefit to those institutions who do not have the services of a full-time dietitian.

Last year's registration of 187 represented 68 hospitals and 53 nursing homes.

Interested participants may contact Miss Hazel J. Baker, President-Elect, Oklahoma Dietetic Association, 706 South Kings Highway, Stillwater, Oklahoma 74074. □





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## **Tulsa County Medical Society Awards Scholarships**

The Tulsa County Medical Society recently awarded \$3,150 in scholarships to eleven students of medicine, nursing and radiologic technology for the 1969-70 school year.

Recipients of the cash grants are:

Wayne Harold Pue, 5924 East 58th Place, Tulsa, a freshman at the University of Oklahoma School of Medicine, \$600.00.

Walter J. Exon, 3729 South Troost, Tulsa, a freshman at the University of Oklahoma School of Medicine, \$225.00.

Larry Prater, 1925 North Denver, Tulsa, a senior at the University of Oklahoma School of Medicine, \$225.00.

Orval Wayne Hyams, 1422 South Quincy, Tulsa, a second-year student at Hillcrest Medical Center School of Nursing, \$150.00.

Thea Webb, 1136 South Troost, Tulsa, a second-year student at Hillcrest Medical Center School of Nursing, \$150.00.

Charles R. Woltz, Jr., 4137 East 28th Place, Tulsa, a second-year student at Hillcrest Medical Center School of Radiologic Technology, \$150.00.

The Doctor Anna Luvern Hays memorial scholarships, named in memory of the late Tulsa pediatrician who died in 1965, went to:

Edwin Kent McClanahan, 1868 East 17th, Tulsa, a freshman at the University of Oklahoma School of Medicine, \$600.00.

Patrick Louis Mullens, 559 South Allegheny, Tulsa, a junior at the University of Oklahoma School of Medicine, \$600.00.

Three scholarships were awarded from funds contributed by the Woman's Auxiliary to the Tulsa County Medical Society, and went to:

Beverly Anne Donaldson, 1431 South Rockford, a second-year student at St. John's Hospital School of Nursing, \$150.00.

Janice Graham, 1136 South Troost, a second-year student at Hillcrest

Medical Center School of Nursing, \$150.00.

Linda A. Paine, 7144 East 6th, Tulsa, a second-year student at the University of Oklahoma Medical Center School of Radiologic Technology, \$150.00.

The awards are made annually to students in health careers.

## **House of Delegates Recommends Medical Assistants Society**

During the 1969 annual meeting, the OSMA House of Delegates took an unusual action and recommended that all OSMA member-physicians urge their medical assistants to join the Oklahoma State Medical Assistants Society. At the same time, the house lauded the fine educational effort being made by this organization.

The recommendation grew out of a special report that was given to the house meeting by the Council on Professional Education. The report stated that the Medical Assistants Society had announced the creation of an Associate Arts Degree in Medical Assisting to be offered by St. Gregory's College, Shawnee. The two year course of study was designed to train individuals to serve as medical assistants to practicing physicians.

The Associate Degree Program was an outgrowth of the Medical Assistants Society's project to improve their own educational standards. Their education to date had consisted almost entirely of "on the job training" by the physician in his office.

Working with the University of Oklahoma Medical Center School of Health Related Professions, the assistants devised the minimal essentials for a two-year accredited junior college program curricula. It will be offered at St. Gregory's College in Shawnee and an additional four colleges are studying the possibility of using it.

Medical Assistants have worked closely with the OSMA for several years. Two years ago the OSMA offered to undertake the secretarial and office duties of the Medical As-

sistants Society and since that time has published their membership directory, reproduced minutes of their various meetings, handled correspondence for their officers and assisted them in planning various programs.

A special report to the House of Delegates stated, "it is obvious from the continuing education programs and the associate arts degree project that the Oklahoma State Medical Assistants Society is striving to help the medical profession by offering it trained and competent medical assistants. This effort should not go unnoticed or unrewarded by the OSMA."

In the past, various officers of the OSMA have advocated that not only should the medical assistant belong to the organization, but that their physician-employer should consider paying the nominal annual dues. □

## **BOOK REVIEWS**

### **ENDOCRINE AND GENETIC DISEASES OF CHILDHOOD.**

Edited by L. I. Gardner. Philadelphia: W. B. Saunders Company. 1072 pp. \$34.00.

Among the most rapidly advancing frontiers in pediatrics in the past few years has been that relating to genetic and endocrine disorders and physiology. Integration of this considerable expansion of knowledge in a single volume for ready reference has been badly needed. The editor has undertaken this task and with the cooperation of 56 contributors has produced an excellent textbook. It is well organized, complete, and up-to-date. It selects contributors from many areas of the world, not only to present knowledge from those best qualified, but also to bring to the readers an international viewpoint. The practicing pediatrician will find the chapters on Growth and Endocrinology of the Adolescent, Abnormal Growth Patterns in Childhood, and Short and Tall Stature of Otherwise Normal Children and Adolescents of interest.

This book represents an excellent reference on disorders of the endocrine system, metabolic disorders,



chromosomal abnormalities, and medical genetics. The latter portion provides solid help in understanding and managing major biochemical errors and metabolic diseases encountered in infants and children. The chapters are quite complete and detailed and contain full bibliographies covering the literature approximately up to 1967.

Although expensive, this textbook is to be recommended.—*Harris D. Riley, Jr., M.D.*

**STRABISMUS IN CHILDHOOD.** By Herbert M. Katzin, M.D., and Geraldine Wilson, R.N., Fourth edition. Paper, 83 pp. with 24 illustrations. St. Louis: The C. V. Mosby Company, 1968. \$3.95.

The authors state in the preface that this book was written primarily for the parents of children with strabismus. The result is a composite monograph which covers all aspects of strabismus. The chapters are well chosen, concise, informative and practical. The authors also point out many of the questions brought up by the parents, such as those included in the chapter entitled "Why do a child's eyes cross."

The book reads very easily and the diagrams such as that illustrating farsightedness with esotropia complement the text. While not intended to be a highly technical book, it is valuable for the physician because it concisely refreshes his understanding of strabismus and related problems.

Physicians dealing with children will find this small monograph useful and it can be recommended to parents.—*George W. Koehl, M.D.* □

### Kelley Resumes Practice

James W. Kelley, M.D., has announced the resumption of his practice of plastic surgery at 204 Utica Square Medical Center in Tulsa. Doctor Kelley is a graduate of Duke University School of Medicine. □

## DEATHS

ELLIS N. FAIR, M.D.  
1881-1969

A Heavener physician since 1919, Ellis N. Fair, M.D., 87, died in Talihina July 16th, 1969. A native of Scott County, Arkansas, Doctor Fair was graduated from the University of Louisville School of Medicine in 1908. Following four years of practice in Arkansas, he moved to Hodgen, Oklahoma in 1912 and then to Heavener in 1919, where he practiced until October, 1968.

In November, 1958, the Oklahoma State Medical Association took the occasion of "Doctor Fair Day" in Heavener to present him with a Fifty-Year Pin in recognition of his long years of practice and service to his community and profession.

Doctor Fair was the father of Ellis E. Fair, M.D., Ponca City psychiatrist.

CHARLES A. SMITH, M.D.  
1902-1969

A well-known Oklahoma psychiatrist, Charles A. Smith, M.D., died August 2nd, 1969 in Oklahoma City. Doctor Smith, a native of Newark, Texas, graduated from Baylor University School of Medicine in 1930. He established his practice in Oklahoma City in 1931 and had been on the teaching staff of the University of Oklahoma School of Medicine since 1932.

Doctor Smith has served as superintendent of Central State Griffin Memorial Hospital in Norman from 1950-53 and was in private practice in Norman from 1953-68.

He was a past-president of the Cleveland-McClain County Medical Society and the Oklahoma District Branch of the American Psychiatric Association. Doctor Smith was a Fellow of the American Psychiatric Association.

## Miscellaneous Advertisements

**PATHOLOGY RESIDENCIES AND INTERNSHIPS** available in 600-bed general hospital. Fully approved four-year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns — \$6300; residents — \$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

**LOCUM TENENS.** Wanted general practitioner or resident physician with Oklahoma license for two to four weeks to help with vacations. Salary negotiable. Write or call collect: R.R. Boone, Jr., M.D., Mooreland Clinic, Mooreland, Oklahoma. Phone: WY 4-5421, office. Home WY 4-5671.

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**DOCTOR'S COMPLETE OFFICE** for rent. Contact R. A. Conley, M.D., Watonga, Oklahoma. □



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## *The Narcotic Withdrawal Syndrome in the Newborn Infant*

**N**ARCOTIC WITHDRAWAL reactions suffered by newborn infants of maternal addicts are becoming increasingly observed. Fortunately, at the present time, narcotic addiction among pregnant women is comparatively rare in this region as compared to the incidence in many other parts of this country. However, in recent years there has been a remarkable nationwide increase in narcotic use and addiction, especially among females of childbearing age.<sup>1</sup> There is little reason to believe that the incidence will not increase in this area. Thus, it is important that physicians be aware of the clinical features and therapy of the narcotic withdrawal syndrome in the infant, the innocent recipient of a frequently lethal disorder in its mother.

In 1961 the number of reported narcotic addicts in the United States was 46,798, of which 8,973 (19 percent) were female; 89 percent were in the age group of 40 years or under and the 21 to 30 year age group contributed the greatest number of this total.<sup>1</sup> Since that time, the number of known addicts in the United States has substantially risen and the age and sex distribution has also changed—there are now more females in the adolescence age group involved with addicting drugs.

The neonatal narcotic withdrawal syndrome was a medical curiosity until about 1947.<sup>2</sup> However, in the past 20 years many new cases have been reported. The addicting narcotic was usually morphine until the mid-1950's, at which time heroin became the preferential drug among addicts. At present it is estimated that 90 percent of maternal addicts use heroin.

A brief review of the findings in a newly born infant with the narcotic withdrawal syndrome seen recently at Children's Memorial Hospital, University of Oklahoma Medical Center, points up many of the various aspects of this problem. It was possible to document by thorough questioning of the mother that she was addicted to morphine.

Within the first 24 hours after birth, the infant developed extreme irritability; diarrhea; frequent and prolonged crying; nausea and vomiting. Alerted by the maternal history, the occurrence of the withdrawal syndrome in the infant was anticipated and prompt and proper therapy administered with a satisfactory response.

Withdrawal symptoms usually begin in the first 24 hours after birth and may be manifested by extreme irritability; a high-pitched, prolonged, shrill crying; yawning and sneezing; marked tremors; hyperhidrosis; flushed skin; nausea; vomiting; diarrhea; hyperpyrexia followed by profound shock; convulsions; and death. These symptoms may be rapid and may resemble closely tetany, intracranial hemorrhage, hypoglycemia, and/or pyridoxine deficiency as well as other common disorders of the neonatal period.

Failure to recognize the disorder and to initiate appropriate therapy is accompanied by an overwhelming fatality risk—in the range of 95 percent.<sup>3, 4</sup> In a series of 37 infants who were not treated, 33 expired.<sup>3</sup> Furthermore, a preventive approach as directed toward the infant is usually not possible since it is generally advised that no attempt should be made to withdraw narcotics from the mother after the seventh month of pregnancy.<sup>3</sup>

A formal therapeutic program should be available and immediately initiated on recognition of the symptoms of the withdrawal syndrome in the infant. However, the onset of symptoms should be awaited before initiating therapy because of the possibility that the neonate may not be affected. But it is unwise to delay beyond the appearance of the very earliest manifestations. The most useful therapeutic agents are paregoric and chlorpromazine. The dose of each should be adjusted to the needs of the individual infant, remembering that the fetus has usually built up a great tolerance to the narcotic



which is also influenced by the type and dose of drug used by the mother.

Paregoric has proved to be very useful for controlling symptoms during the critical neonatal period and for ease of gradual withdrawal from therapy. In the presence of vomiting so that oral medication cannot be retained, morphine sulfate, subcutaneously, in a dose of .06 to 0.1 mg/kg may be substituted as initial treatment. Morphine is difficult to withdraw and the infant becomes a candidate for permanent addiction. Thus, the use of morphine should be restricted to as few doses as absolutely necessary. As soon as the infant can tolerate oral therapy, paregoric, in a dose of five minims every three to four hours, should be given to control withdrawal symptoms. In addition, it is usually desirable to administer chlorpromazine in a dose of 0.73 to 1.46 mgm/kg orally at the same time that paregoric is given.

The infant is then withdrawn gradually from paregoric, as tolerated, over a period of from two to six weeks by increasing the interval between doses of the medication by hourly increments until an interval of approximately nine hours between doses is reached. Chlorpromazine is maintained at the same level and the paregoric is decreased in drop-wise fashion as tolerated until the infant is receiving only chlorpromazine. Then the chlorpromazine can also be decreased over a period of three to seven days until all medication has been terminated.

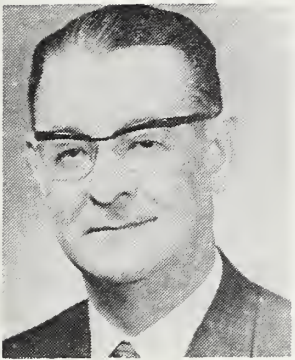
An important but poorly studied aspect of this problem relates to long-range planning for these infants. It has been advised that, after early and successful therapy, the infant be taken immediately and perhaps permanently from the mother and her environment. In that environment there is often exposure to addicted adults and to the tendency of addicts to addict others, even their own children.<sup>3</sup> Although these infants may not be good adoptive risks, some investigators have advocated routine adoption. It is clear this phase of the problem is one which deserves further study.

It is incumbent upon physicians caring for pregnant women to maintain careful surveillance for the possibility of excessive drug use and to inform the pediatrician or other physician caring for the infant immediately after birth of any possibility of narcotic addiction. Newborn infants with unexplained and bizarre reaction patterns should be considered for the possibility of the narcotic withdrawal syndrome and steps to establish or refute this diagnosis should be taken as soon as possible in order to save the infant.—*LeRoy C. Mims, M.D., and Harris D. Riley, Jr., M.D.* □

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It becomes more evident day by day that this is the age of "organized" effort — organized government, organized labor, organized business, organized non-profit groups. The body politic of your profession, collectively called "organized medicine," is vested in your county medical society, your state medical association and the American Medical Association. These are the organizations to whom the public—your patients—approach for statements of policy.

In a heterogeneous group such as ours, the strength we exhibit must depend upon our unity of purpose and our mutual concern for each special-interest component within our ranks and, of course, we must always keep in mind the best interests of the public we serve. We cannot afford the luxury of ignoring the interest of any one group.

The educator cannot sequester himself and his problems. The solo practitioner cannot isolate himself. The member of a group practice cannot sublimate his problems. In the past Summer, almost at monthly intervals, unjustified and misinformed attacks have

been made on various segments of the medical community. There are promises of more to come. In each instance, your association has stood firm in the protection of you and your colleagues. Informed support from each member is essential.

The key to cooperation is the active participation of each member of this association. The activity of our employed staff, our officers and committeemen is not enough. A county society meeting needs the attendance of every member as if his professional life depended upon it. For surely it does.

With this type of attention comes the next ingredient for the success we must obtain—which is effective, informed internal communication. With this information uniformly assimilated by all will come unity of purpose—a single, and effective voice.

Your officers, committeemen and staff are charged with speaking for you daily. Your ideas, your desires, can be policy only if you transmit them through your delegates and trustees. The wealth of untapped brainpower within our ranks must be mobilized. Each member owes it to himself, to the profession and the public, to recognize the urgency of this problem, or else all three will be delivered from apathy into bondage. □

Sincerely yours,

*Willard E. Dwyer*



## Shock from Hidden Hemorrhage

EDWARD L. COMPERE, M.D.

*Closed fractures of the femur or the pelvis may produce hypovolemic shock resulting in death of the patient without any visible loss of blood.*

Shock from hidden hemorrhage may result from injuries which produce a rupture of the spleen, laceration of the liver, perforation or laceration of the aorta or vena cava, similar injuries to other organs, or viscera of the thorax or abdomen. Although little or no blood is visible, the alert physician will usually correctly diagnose and treat these injuries. Shock from fractures of the pelvis or the femurs may occur without visible loss of large quantities of blood. The thigh of the average adult patient is capable of containing and hiding as much as two liters of blood. Fractures of the pelvis may be accompanied by complete severance of one or more branches of the hypogastric artery. The well-trained physician will very quickly recognize the signs of shock and in the absence of large amounts of external visible blood loss, he will conclude that serious hemorrhage is occurring within a body cavity or

into the tissues of one or more of the extremities.

As an orthopaedic surgeon, I am primarily concerned with shock which results from fractures of the pelvis or multiple fractures of the bones of the extremities. Shock from these orthopaedic injuries may be caused by loss of blood (hypovolemic shock) or by fat embolism or by a combination of the two.

Shock is a tissue perfusion defect, not merely a defect of central pressure. The vital organs, in order of importance, are the brain, heart, lung, liver, and the kidneys. If these organs are not adequately perfused with blood, shock will be present. The loss of 12 to 20 percent of the circulating blood volume will result in hypovolemic shock.

Renal insufficiency due to inadequate perfusion, with less than 30 cc. of urine secreted per hour, means that the patient is in a state of serious shock. Shock is followed or accompanied by an increase in epinephrine and norepinephrine of 50 to 350 times basal and this will produce peripheral pressure effects in the liver and kidney, but not in the brain or the heart. What may not be quite so well known is that cortisone is secreted during shock from trauma in normal or in some cases greater than normal amounts.

Shock following severe fractures of the pelvis is always a threat to the life of the patient. Shock due to fractures of the pelvis may be much more severe if there is associated fat embolism. When there are fractures

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of the pelvis with other major injuries such as fractures of the femur, fractures of both legs, crushing chest injuries, or head injuries, the death rate is high.

Meyer and Bush,\* while on the Orthopaedic Service of Charity Hospital in New Orleans, picked at random one-hundred charts of patients who had suffered multiple injuries from car accidents. There were fifteen deaths, with seven of these due to fat embolism. Only three of these were diagnosed before death. Nine of the survivors developed dyspnea, cyanosis, disorientation, and delirium. Four of these had free fat in their urine; seven had petechiae. Twenty-three patients with mass trauma were given high molecular weight Dextran, 500 cc. every fifteen hours for four to five days, starting as soon as possible after arriving at the hospital. The hematocrit was checked daily. None of these patients died. One did have fat embolism.

In 1964 Perry and McClellan<sup>1</sup> reported deaths from fractures of the pelvis caused by traffic accidents. Eighteen of fifty-four patients with fractures of the pelvis and one or more fractures in the lower extremities died. None of these eighteen patients had large blood vessel injuries such as rupture of a major branch of the hypogastric artery. Of 100 patients with pelvic fractures and no other major associated injury only six died. In another study, 37 of 196 patients who had suffered fractures of the pelvis died. Fifteen of the 37 or 7.7% of 196 injured patients died primarily from the pelvic injury. Although not suspicious by nature I do suspect that unrecognized hidden

\*Personal communication. Not yet published.

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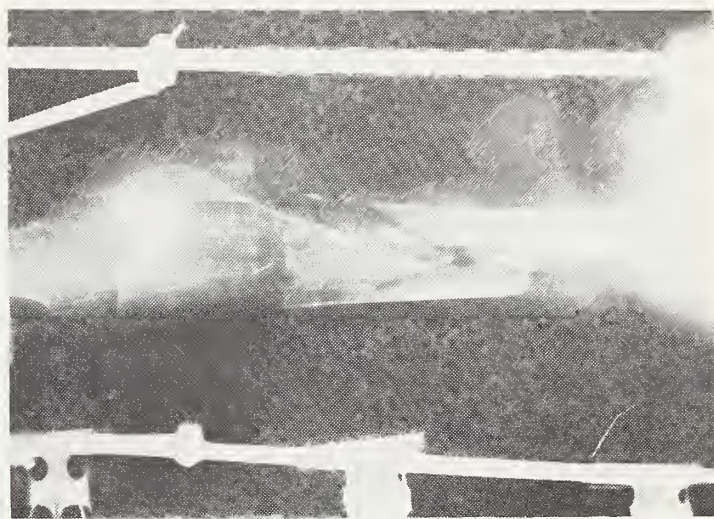


Figure 1. V.C. Female, 63-year-old, whose femur was crushed when a golf cart overturned, pinning her beneath it. There was no break in the skin in the region of the fracture. Within three hours she was in shock, with low blood pressure, thready pulse and hemoglobin of 9 gm. Blood transfusions were started and the hypovolemic shock was quickly reversed.

hemorrhage with or without fat embolism was the cause of most of these deaths.

Frequently, shock of patients who suffer fractures of the pelvis is not recognized, until it becomes so severe that death is impending, because there was no outward evidence of any blood loss. Hidden blood loss is common in pelvic fractures. Rupture of the superior gluteal artery or other branches of the hypogastric artery is one of the most common causes of severe hemorrhage, shock and death in patients who suffer a type III fracture (double break in the pelvic ring) of the pelvis. The most common cause of fractures of the pelvis which result in shock due to hidden hemorrhage and/or fat embolism with threat of death is an accident in which a pedestrian is struck by a car. Occupants of automobiles involved in collisions between two or more moving vehicles make up the second largest number of patients with severe fractures of the pelvis. Falls constitute the third most common cause of fractures of the pelvis.

Seavers, Lynch, Ballard, Jernigan and Johnson<sup>2</sup> in 1964 urged the most careful evaluation of the patient from the standpoint of blood volume, hematocrit and blood counts made at frequent intervals after all fractures of the pelvis. These authors and many others point out that most patients who have extensive pelvic fractures do need blood transfusions. While waiting to cross-match the patient and to find a suitable blood don-



or, Low Viscosity Dextran, known as "Dextran-40," a 10% Dextran solution of mean molecular weight 40,000 in saline or 5% dextrose should be started and continued until suitable whole blood is available. If, after several blood transfusions, the blood volume, hematocrit and red cell count continue to drop, the surgeon should suspect internal hemorrhage such as rupture of a superior gluteal artery or other branches of a hypogastric artery. Miller,<sup>3</sup> in 1963 first suggested hypogastric artery ligation to control hemorrhage and prevent further blood loss in patients with severe pelvic fractures. In 1964 Seavers, Lynch, Ballard, Jernigan and Johnson<sup>2</sup> also advised hypogastric artery ligation for uncontrollable hemorrhage. Hauser and Perry<sup>4</sup> recognized hypogastric artery injuries and successfully carried out ligations to control massive hemorrhage in pelvic fractures. They reported four cases of hypogastric artery ligations. In one case branches of both hypogastric arteries were injured. Three of the patients recovered completely. One patient died on the seventh day of fat embolism. The patient with both hypogastric arteries ligated survived without obvious circulatory deficiency in either lower extremity.

Severe hypovolemic shock associated with fractures of the pelvis or closed comminuted fractures of a femur, with or without other major injuries and without any visible loss of blood, occurs much more frequently than is generally known. The incidence of fat embolism in pelvic fractures has not been well established. Fat embolism, however, can simulate or greatly increase shock due to hemorrhage. All patients who have suffered a fracture of the pelvis or comminuted fractures of one or both femurs should be suspected of having injuries to blood vessels such as the hypogastric artery or some of its branches. Fat embolism should always be considered when a patient shows the clinical manifestations of shock. Hypovolemic shock must be treated promptly and adequately. If there is associated fat embolism, this should be treated. Moraes, Teixeira, Arbit and Bergan<sup>5</sup> have demonstrated the augmentation of arterial collateral blood flow when "Dextran-40" was administered by infusion.

In the presence of fat embolism this is of great importance and it should certainly be used in addition to replacement of blood and restoration of blood volume.

The initial clinical evaluation of hypovolemic shock includes:

1. Vital signs, arterial blood pressure, pulse, respiratory rate;
2. Hematocrit;
3. Hourly urinary output;
4. Central venous pressure;
5. Blood volume measurement.

### SHOCK IS MANIFESTED BY:

1. A drop in blood pressure to below 90 mm. Hg.
2. A rapid thready pulse.
3. Pale, cool, moist skin.
4. Increase in respiratory rate.
5. Patient becomes agitated and apprehensive.
6. Coma and death if these abnormal conditions cannot be checked and reversed.

Shock due to extensive hemorrhage whether external or hidden should be treated by one or more of the following:

1. Blood transfusion. Whole blood transfusion is primarily indicated in hypovolemic shock.
2. Plasma.
3. Albumin.
4. Clinical Dextran (Dextran-80). Clinical Dextran is a six percent solution of Dextran, of mean molecular weight of about 75,000, in saline.
5. Low Viscosity Dextran (Dextran-40). "Dextran-40," a 10 percent Dextran solution of mean molecular weight 40,000, is provided in saline or five percent dextrose. It is primarily useful for the treatment of alterations in flow properties (increased viscosity) frequently seen in shock and in fat embolism.
6. Packed red cells.
7. Fluid and electrolyte therapy.

Ringer's solution. Neither electrolyte nor crystalloid solutions, however, are adequate substitutes for colloids.

Continued oozing of blood, visible or hidden, leading to severe anemia which is unrecognized and untreated for days or weeks will result in injury to the central nervous system, the heart and other vital organs.





Figure 2. C.A.M. 88-year-old male who missed his step from the alley to a high curb and fell. In spite of several transfusions he continued to show a decrease in red blood cells, hemoglobin and hematocrit. The bleeding was all into the intermuscular planes and tissues of the thigh. There was no visible bleeding. After internal fixation of the fracture and several more transfusions, he made an uneventful recovery.

Prolonged severe secondary anemias can cause spinal cord changes due to ischemia similar to those seen in pernicious anemia. The following case report is given as an example of how inadequate examination and failure to diagnose hypovolemic shock and severe anemia due to hidden hemorrhage may result in severe damage to the spinal cord, cardiac ischemia and, if not recognized and effectively treated, death.

J. L., MALE, AGE 66 YEARS

This patient was brought to the emergency room of a large city hospital after having suffered injuries from a fall. There was no visible evidence of blood loss. The patient complained of severe pain in the region of the left ischium, pubic bone and sacrum and pain in the lumbar region of the back. Multiple roentgenograms were taken but the quality of the films was never satisfactory. The patient was semi-comatose for several

days, but there was no visible blood loss and shock was not diagnosed. Subsequent roentgenograms revealed a fracture of the body of the sacrum with anterior displacement, fracture of several lumbar vertebral bodies, fracture of the left pubic and ischial rami, and subluxation of the left sacroiliac joint. Initial blood counts made at the time of his admission to the hospital showed only a slight anemia. More extensive clinical tests were not made. Subsequently this patient showed progressive weakness in both legs and about two weeks after admission it was recognized that there was partial paralysis, but this was explained as probably due to concussion of the spinal cord. The paralysis became more marked, with hypesthesia and loss of position sense in both feet. The attending physicians were internists who had treated this patient two years before for a cardiac infarction. They did not consider the possibility of hidden hemorrhage with continued bleeding. A mass in the left lower abdominal quadrant was noted, but was thought to be a fecal impaction.

On the 23rd day after injury this patient was examined by a consultant who requested complete blood studies. The hematocrit was 19.5 percent; hemoglobin 6.2 grams percent. The diagnosis was severe secondary anemia with ischemic changes in the spinal cord. The patient was unable to move either leg. An electrocardiogram showed evidence of myocardial ischemia. The mass in the left lower quadrant was aspirated and found to be a large hematoma. Multiple whole blood transfusions restored the blood volume, hemoglobin and red cell count to normal. Iron and vitamins were administered. The patient slowly regained strength and sensation in his legs and feet and was discharged ambulatory, but with a post-sacral decubitus.

At no time after this severe injury was this patient examined for fat embolism. A review of the history showed that for the first two or three days after his admission there was evidence of shock characterized by low blood pressure, rapid thready pulse, increase in respiratory rate, and semi-coma. Later the patient was agitated and apprehensive. If the blood pressure was taken it was not recorded. This patient may have suffered from fat embolism and certainly did have hypovolemic shock secondary to hidden



## Shock / COMPERE

hemorrhage from a branch of the left hypogastric artery. The severe paralysis with hypesthesia and loss of position sense in both feet resulted from prolonged ischemia of the spinal cord. The marked and rapid improvement which he showed when the blood volume and blood cell count were restored to normal and maintained at a normal level was most gratifying.

V. O., FEMALE, AGE 63 YEARS

This patient fell in her home and suffered a markedly comminuted, closed, intertrochanteric fracture of the right femur. When she was admitted to the hospital six hours later she was beginning to show signs of shock. Her skin was cool and moist and the pulse was rapid and thready. An electrocardiogram was interpreted as showing evidence of myocardial ischemia. The red blood cell count was 3,100,000; the hematocrit was 23 percent and the hemoglobin was 9.2 grams percent.

Plasma was started and whole blood was given as soon as it was available. All signs of shock quickly disappeared. The thigh became increasingly swollen from the hip to the knee. By the second day the hematocrit and hemoglobin were again low and signs of shock began to reappear. Another unit of whole blood was given and her progress, after an open reduction and internal fixation of the fracture, was entirely satisfactory.

All tests for free fat in the blood and urine were negative. It was estimated that she had lost at least three units of blood from the fracture site into the tissues of her thigh during the first thirty-six hours after the injury.

In conclusion, I do recommend that a careful evaluation for hypovolemia be made when a patient is brought to the emergency room of any hospital because of an injury to the pelvis. The patient should be examined for fat embolism and checked repeatedly for evidence of shock. Hidden hemorrhage and fat embolism should be considered in all cases of pelvic fractures and comminuted fractures of the femur or multiple closed fractures of any of the major long bones. Many lives have been lost when physicians have been blind to clinical signs of shock because there was no visible loss of a large volume of blood. The older patients are more likely to suffer shock from trauma and are less likely to recover even if prompt and adequate treatment is instituted.

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# Non-Surgical Treatment of Temporomandibular Joint Arthrosis

BILL E. TAYLOR, D.D.S.

*Head, neck and shoulder pain of varying intensity may result from malocclusion of the teeth which can be corrected by competent medical-dental management.*

**V**ERTIGO, syncope, and tinnitus, accompanied by pain in the cervical or temporal areas and trapezius muscle may be caused by faulty occlusion of the teeth.<sup>1</sup>

Many times "headache" means wrong direction or wrong pace. A large segment of our mechanized, urbanized, population is going at an over-stimulated and under-released pace. The result of this pace often is a state of tension that is relieved by setting the jaw and gritting the teeth.

If there is an interference in the occlusion of the teeth of these individuals, head pain is very likely to be present. Because this disease is rather non-specific in origin but sometimes quite painful, many different specialists, e.g., neurologists, otolaryngologists, internists, may be consulted for this problem. For this reason it is my opinion that the physician should consider adding to his differential diagnostic procedure a test for temporomandibular joint arthrosis . . . "TMJ dysfunction."

It has been estimated that 20 percent of our population suffers from this ailment. Physicians and dentists should be alert to the prevalence of this condition and to the need for competent medical-dental management.

The temporomandibular joint is a ginglymo-arthroal articulation consisting of the anterior part of the mandibular fossa of the temporal bone and the articular tubercle above, the condyle of the mandible below and five ligaments.<sup>2</sup>

## DIAGNOSIS

The problem of differential diagnosis is the fundamental one confronting the physician. The result of pathologic occlusion is not simply impairment of the function of the mandible. The neuromuscular system is involved with pain in such seemingly unrelated areas as the neck and arm. Acute intrinsic traumatic temporomandibular joint arthrosis and painful muscle spasms may occur without any change in occlusion or they may be precipitated by occlusal changes. The patient may indicate that the pain came suddenly while yawning, biting an apple, or under other circumstances of opening the mouth widely. Sometimes the symptoms are initiated by poorly constructed dental restorations and appliances or misguided attempts at occlusal adjustment.<sup>3</sup> When infection, arthritis, or migraine disorders have been found to be negative, temporomandibular joint dysfunction should be considered.

## SYMPTOMATOLOGY

The following signs or symptoms usually will be present upon examination:

1. Pain and tenderness in and around the affected joint.
2. Clicking and crepitation elicited by stethoscopic examination.



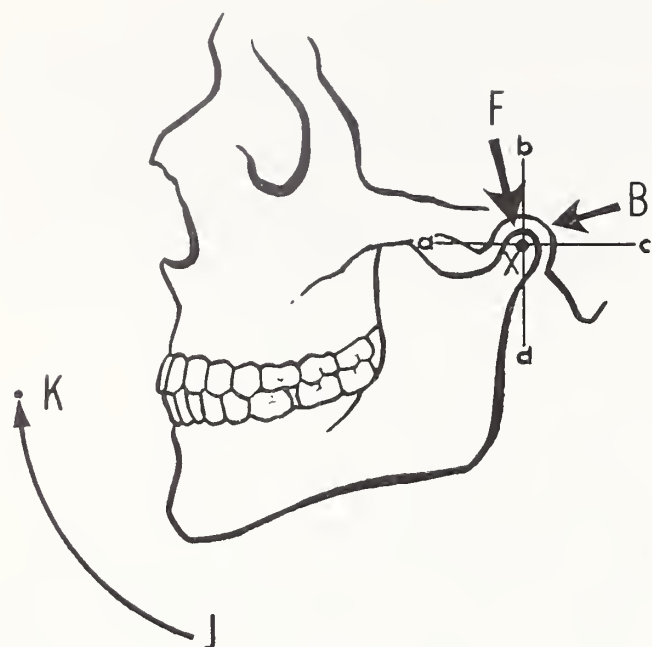


Figure 1. Correct interdigitation of the teeth, in harmony with the neuromuscular closure of the mandible and the temporomandibular joints. The mandible has described the arc of closure, JK. X, the center of condyle, is the pivotal point. Note that the joint gap, F, is evenly spaced to the glenoid fossa, B. (By permission, see reference 5.)

3. Spasm of the external pterygoid muscles. Palpation of the muscle (posterior to the last upper molar on the affected side) produces exquisite pain, which in turn, radiates to the ear.
4. When the mouth is opened, the jaw does not move in a normal, straight, vertical line, but veers toward the affected side.
5. Hyper or hypomobility of the mandible, accompanied by locking of the jaw.
6. The pain is usually described as chronic or dull. It may have been present for several years with no change or it may vary in intensity from time to time.
7. Often symptoms of anxiety are present such as insomnia, depression, and gastrointestinal complaints.<sup>1</sup>

Although this disease is more prevalent in those with natural teeth, denture wearers

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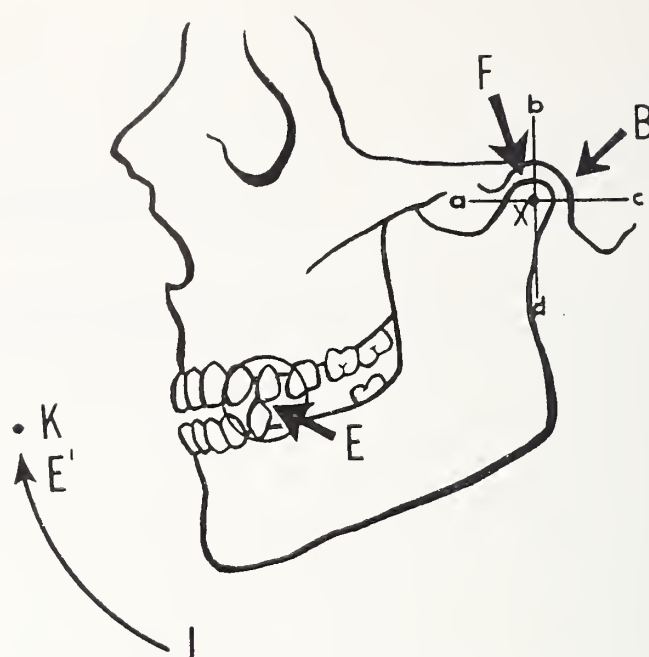


Figure 2. First stage of pathologic closure involving an occlusal contact of an upper and a lower tooth. The pathologic interfering occlusal contact at E has prevented the mandible from completing closure. The mandible has described the arc JE'; the condyle has rotated on X. (By permission, see reference 5.)

also may be afflicted. Faulty dentures which do not maintain the proper space between the nose and chin allow an over-closure of the mandible.

Any abnormal position of the condyle in the glenoid fossa can produce intolerable pressures on a most unique area of the body, the ear. Nowhere in the body are there so many sensory organs in such a compact area. This may explain why vertigo and stuffiness in the ear are not unusual symptoms of temporomandibular joint dysfunction.

A strange but challenging feature of this disease is the psychogenic factor. It has been found that 95 percent of the patients are middle-aged, light complexioned women. This is why such close medical-dental coordination is necessary. After the physician has made the diagnosis and evaluated the psychogenic and nutritional status of the patient, the dentist assumes the responsibility for treating the malocclusion.

#### TREATMENT

The objective of treating the occlusion (occlusal equilibration) is to distribute the forces of mastication to as many teeth as possible and to enable the condyle to seat correctly in the temporomandibular joint and glenoid fossa. There must be coordi-



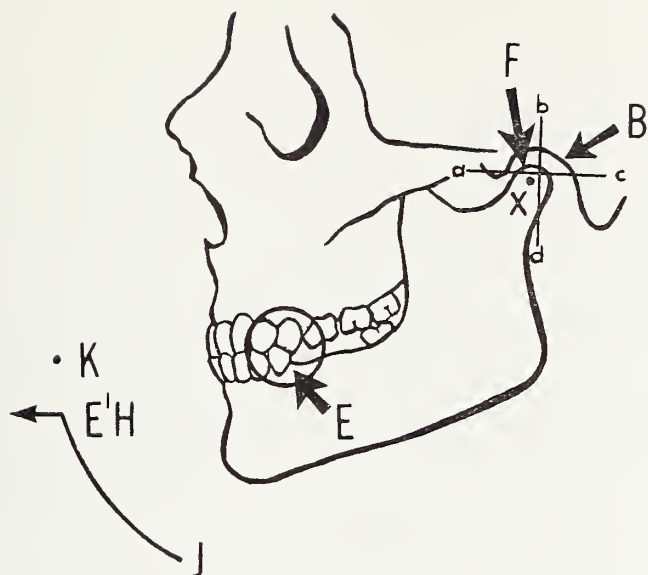


Figure 3. Completion of pathologic closure involving an occlusal contact of an upper and a lower tooth. The pathologic interfering occlusal at E has brought about a deflection of the mandible and malpositioning of both condyles. As the mandible described the arc of closure JE' it struck the interfering contact at E, causing the mandible to shift forward and complete the arc E'H. The center of the condyle, X, has shifted inferiorly and anteriorly from the point of intersection of a, b, c, and d. Note that the joint gap, F, is narrow anteriorly and wider superiorly and posteriorly. Compare with F of Figure 1. (By permission, reference 5.)

nated movement of the articular disc, condyle and external pterygoid muscles. There should be no unevenness in the teeth which would cause the mandible to shift from a physiologic point of closure to one of convenience or accommodation.<sup>5</sup> See figures 1, 2 and 3.

As long as there is spasm of the external pterygoid, the mandible will close crookedly just as a person walks crookedly if he has a spasm of the gastrocnemius. For this reason, no attempt at equilibrating is made until the spasm is gone and the patient is entirely symptom free. This state is reached by constructing, for the patient, a mandibular auto-repositioning appliance which allows a physiologic correction of the neuromuscular imbalance. Once the pain is gone and correct mandibular movement has been restored, the interfering occlusion can be treated and prevented from recurring.

#### CASE HISTORY

A 43-year-old woman developed a dull, aching pain in the left cheek area. She described it as beginning as a dull sensation which gradually increased in intensity.

There would be periods when she was relatively comfortable and could rest fairly well. It seemed to be less severe at night and intensify during the day and would become almost unbearable during late afternoon.

After consulting her physician, whose report was negative, she thought that she might have an abscessed tooth. A dental examination revealed no carious or impacted teeth and the soft oral tissues were normal.

When the pains persisted she was referred to an EENT specialist who treated her occasionally over the next few months.

When the patient was referred for a temporomandibular joint examination, she stated that she had been in constant pain for five months. The spastic external pterygoid muscle was injected with xylocaine and a mandibular auto-repositioning appliance constructed. Within five days the patient was comfortable and after two months the spasm was entirely gone. The teeth were equilibrated to close in harmony with the musculature. The symptoms were relieved and the patient will continue to be observed to prevent recurrence of the condition.

#### SUMMARY

Temporomandibular joint dysfunction is a noninfectious, degenerative disease of the joint tissues which is caused, in 90 percent of the cases, by pathologic occlusion of the teeth. The condition should be suspected in the presence of the following symptoms: clicking, crackling noise, crepitation, tenderness and pain in and around the temporomandibular joint and occasional locking of the jaw. The pain may affect numerous areas of the head, the neck and shoulder regions, the arms and fingers, and even the lumbar spine. Treatment calls for close coordination of the efforts of the dentist and the physician. □

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# Geographic and Secular Variation in Mortality from Malignant Disease in Oklahoma 1956-1965

NABIH R. ASSAL, Ph.D.  
ROBERT D. LINDEMAN, M.D.

*A dramatic increase in lung cancer mortality has been reported for Oklahoma. The disease appears to be more prevalent in the northeastern counties of the state.*

## I. Cancer of the Respiratory System (ISC 160-164)

**M**ORTALITY from cancer of the respiratory system (ISC 160-165) occurring to Oklahoma residents during 1956-65 was analyzed. Age-sex-race specific and adjusted death rates were tabulated for 1956-60 and 1961-65. Average annual age-adjusted death rates were tabulated for white males and females for the ten-year period and plotted on county maps. An attempt was made to relate secular changes and geographic differences in mortality to factors in the human environment or personal habits.

The secular trends are consistent with those reported in the rest of the United

States. A dramatic increase in cancer of the respiratory system is indicated. This increase may have been influenced by exposure to air pollution and cigarette consumption. The geographic distribution shows lung cancer to be more prevalent in the northeastern counties, an area where zinc, lead, and coal mining predominates. The high mortality of respiratory cancer in Oklahoma, a rural state, is a very significant finding.

## INTRODUCTION

Variation in disease frequency among different populations may provide important clues to etiology of a disease. Numerous examples can be cited in the existing literature where geographic or secular variations in disease incidence have been associated with some aspect of the human environment or genetic composition of the population aiding in the identification of a determinant of disease frequency.

The mortality from lung cancer has been on the increase in the last 20 years until it is now the most common death-producing cancer among men in this country.<sup>14</sup> This extraordinary rise has not been observed in malignancies involving other tissue sites.<sup>13</sup> Curwin, *et al.* reported a similar increase in lung cancer mortality in England and Wales.<sup>3</sup> Although improvement in diagnosis and a general aging of the population may account in part for these rising mortality rates,

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This research was partly supported by the Oklahoma Regional Medical Program and is part of a Ph.D. dissertation.



there is no doubt that a true increase in lung cancer mortality has evolved.<sup>13</sup>

Special interest has been focused upon cigarette smoking and air pollution as the newest features in the human environment of etiological importance in the development of lung cancer. Cigarette consumption has increased markedly in the United States since World War I. In all of the many retrospective and prospective studies using different techniques in different populations, large increases in lung cancer risk have been observed in smokers over non-smokers.<sup>13</sup>

The ever-increasing urban exposure to air pollution has been suggested as a determinant of the current epidemic of lung cancer.<sup>7</sup> Hammond and Horn,<sup>7</sup> in the United States and Curwen and Kenneway,<sup>3</sup> in Great Britain showed higher lung cancer mortality for persons residing in urban areas than in rural areas which could not be explained by differences in smoking in the respective population. Stock and Campbell suggested that the effects of tobacco and atmospheric pollution might be additive.<sup>15</sup>

Studies among the Schneeberg and Joachimsthal miners (mines distinguished for a high radioactivity of the ore) showed lung cancer accounted for 75 and 40-50 percent of total deaths respectively.<sup>11</sup> Lung cancer death rates have been shown to be 29 times greater among employees of six chromate

plants in the United States,<sup>2</sup> five times greater in nickel workers in South Wales,<sup>4</sup> and 15 times greater in workers employed 20 or more years in asbestos plants<sup>5</sup> than in the general population. The mortality for retired males of a London gas company was 80-100 percent above the expected.

The purpose of the present study was to make observations on the geographic distribution of deaths from malignancies in the counties of Oklahoma in order to identify clusters of high and low mortality occurring between 1956 and 1965. An attempt has been made to correlate these clusters with features in the environment which might be influencing death rates. This first report deals with malignancies of the respiratory tract.

METHODS AND PROCEDURES

Mortality data were obtained from death certificates filed in the Office of Vital Statistics, Oklahoma State Health Department. Information from all resident death certificates from malignancies filed between 1956 and 1965 was transferred to IBM cards for tabulation.

Deaths from malignant disease were subclassified by sites of involvement using the international statistical classification (ISC) of disease code revised in 1955.<sup>9</sup> The data in this report includes an analysis of malignancies involving the following sites:

ISC Code	Specific Site
160	Nose, nasal cavity, middle ear, secondary sinuses
161	Larynx
162-163	Bronchus, trachea, and lung
164-165	Mediastinum and secondary thoracic organs

The data were grouped into two five-year periods (1956-60, 1961-65) to establish secular trends, by sex and race (white, non-whites) and by age (< 5, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75+) to quantify age-sex-race specific rates and by county (77 counties) to establish geographic distribution. The Oklahoma resident population by age-sex-race and county was estimated for the mid-point of each five-year period from the 1950 and 1960 censuses.

The direct method of adjustment,<sup>8</sup> using the 1960 Oklahoma white male census as the standard, was utilized to calculate age-sex-race adjusted death rates per 100,000 populations for the 77 counties for the two

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five-year periods. The average annual age-adjusted death rates for the entire ten-year period were tabulated by county and plotted on Oklahoma maps.

Ideally, we would like to determine if the disease frequency formed patterns of irregular distribution (clustering) or was randomly distributed within the state. Therefore, based on the mortality rate for each malignancy by site of involvement, the 77 Oklahoma counties were divided into four quartiles. Three or more adjacent counties in the highest or lowest quartiles were examined as a "cluster." The presence of geographic clustering was also tested by the Kendall method<sup>12</sup> by determining the similarity between male and female death rates by county.

Counties in the state were designated as (1) metropolitan, if the county contained a major city with a population over 30,000; (2) non-metropolitan, if the county contained a major city with a population between 15,000 and 30,000; or (3) rural, if the county did not contain a major city with a population of at least 15,000 in order to examine differences in mortality between urban and rural areas. Based on the 1960 Oklahoma census, ten counties are classified as metropolitan; 17 as non-metropolitan; and 50 as rural. To ascertain if significant differences in mortality existed among the three urbanization classes, the white male and female average annual age-adjusted death rates by county were ranked and tested by the Kruskal-Wallis rank test.<sup>12</sup>

As an index of the extent of cigarette smoking the per capita sales of cigarettes by district were obtained for the period 1960-61 and 1965-66 and plotted on the Oklahoma state map. Tax paid per capita sales for Oklahoma state were compared with the national average from 1950-66.

The mineral resources and fuels maps of Oklahoma were examined in an effort to correlate coal, petroleum, uranium and other mineral mining and processing areas with clusters of high mortality rates.

#### RESULTS—SECULAR TRENDS

There were 5542 deaths from cancers of the respiratory system occurring in Oklahoma residents for the ten-year period 1956-65.

The mortality experienced by Oklahomans from cancer of the nose, nasal cavities and sinuses (ISC 160) shows an increase in the age-adjusted death rates for all four sex-race groups (Table 1). The male death rates more than doubled during the two five-year periods. The adjusted death rates for cancer of the larynx (ISC 161) show inconsistency of trends for the four groups, a stable trend for the white males, an increase for the non-white males and a decrease for the female population (Table 1). The adjusted male death rates for cancer of the larynx are on the average, about nine times greater than female rates.

As for cancer of the lung, trachea, and bronchus (ISC 162-163), a dramatic increase is observed for the white and nonwhite males, a slight increase for the white female and a slight decline in the nonwhite female

Table 1  
Cancer Deaths and Age-adjusted Rates by Specific Site, Oklahoma, 1956-1965,  
(Rates per 100,000 population).

Cancer Site		White Male		White Female		Nonwhite Male		Nonwhite Female		1956-1965	
		1956-60	1961-65	1956-60	1961-65	1956-60	1961-65	1956-60	1961-65	Total	Rank
Nose, Sinuses and Middle Ear (ISC 160)	Deaths	16	38	15	20	1	3	0	5	98	32
	Rate	1.5	3.4	1.2	1.5	1.1	3.0	—	3.7		
Larynx (ISC 161)	Deaths	95	100	17	10	6	12	1	0	241	26
	Rate	9.3	9.2	1.4	0.7	6.5	12.6	1.0	—		
Lung, Trachea, and Bronchus (ISC 162-3)	Deaths	1732	2282	305	430	100	123	30	31	5033	1
	Rate	170.2	211.6	26.7	34.1	109.9	130.3	30.9	28.9		
Mediastinum, Thoracic Cavi- ties (ISC 164-5)	Deaths	35	78	13	36	0	1	1	6	170	27
	Rate	3.4	7.1	1.1	2.7	—	1.0	1.0	5.7		



Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population

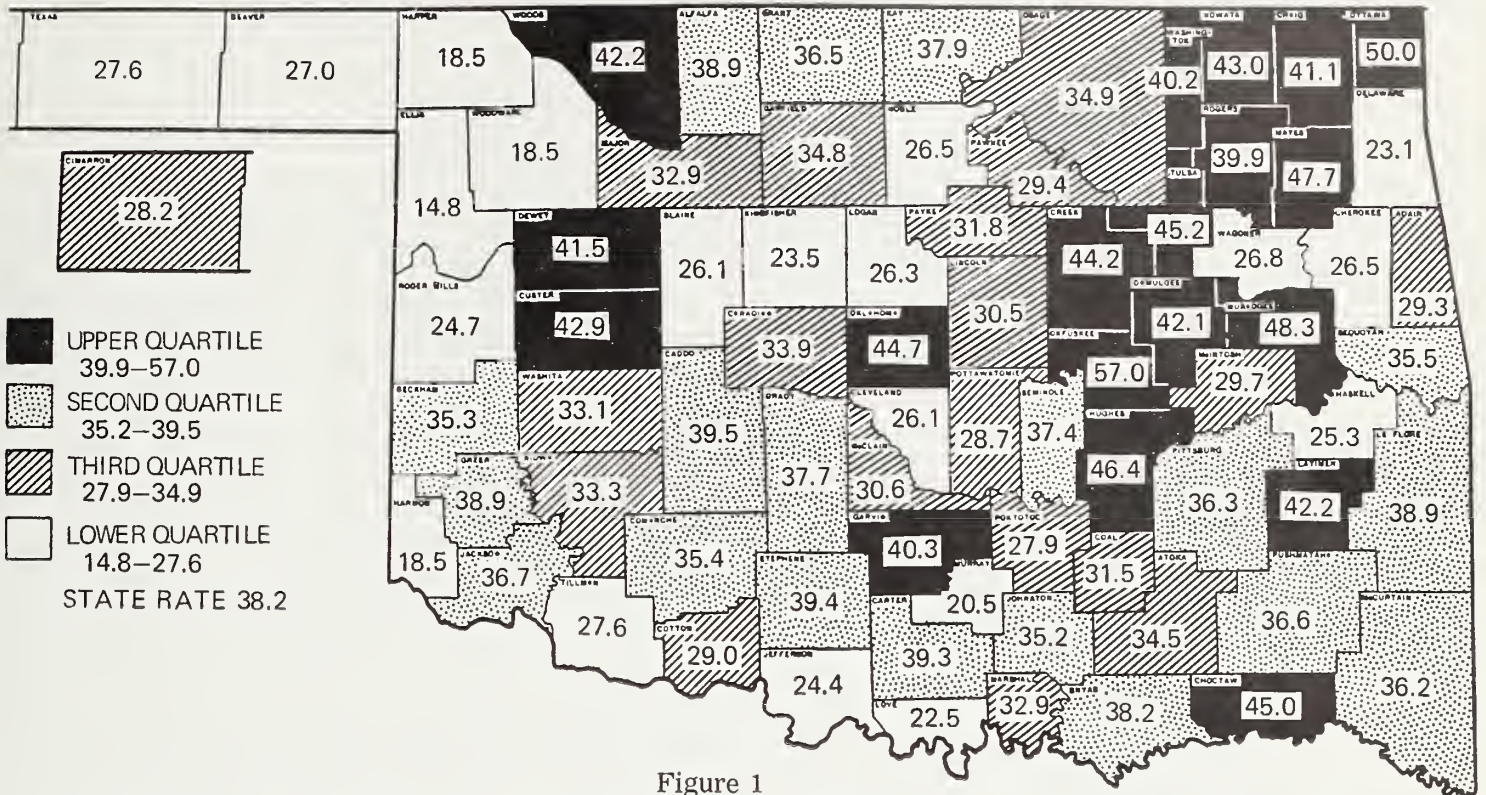


Figure 1

Average annual age-adjusted death rates for cancer of the lung, trachea, and bronchus (ISC 162-163), while males.

adjusted death rates. The rates for the white males are much higher than the nonwhite males. For both races, the male rates are approximately four to seven times higher

than the females (Table 1). Cancers of the mediastinum and thoracic cavities (ISC 164-165) show a dramatic increase during the ten-year period. The adjusted rate more than

Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population

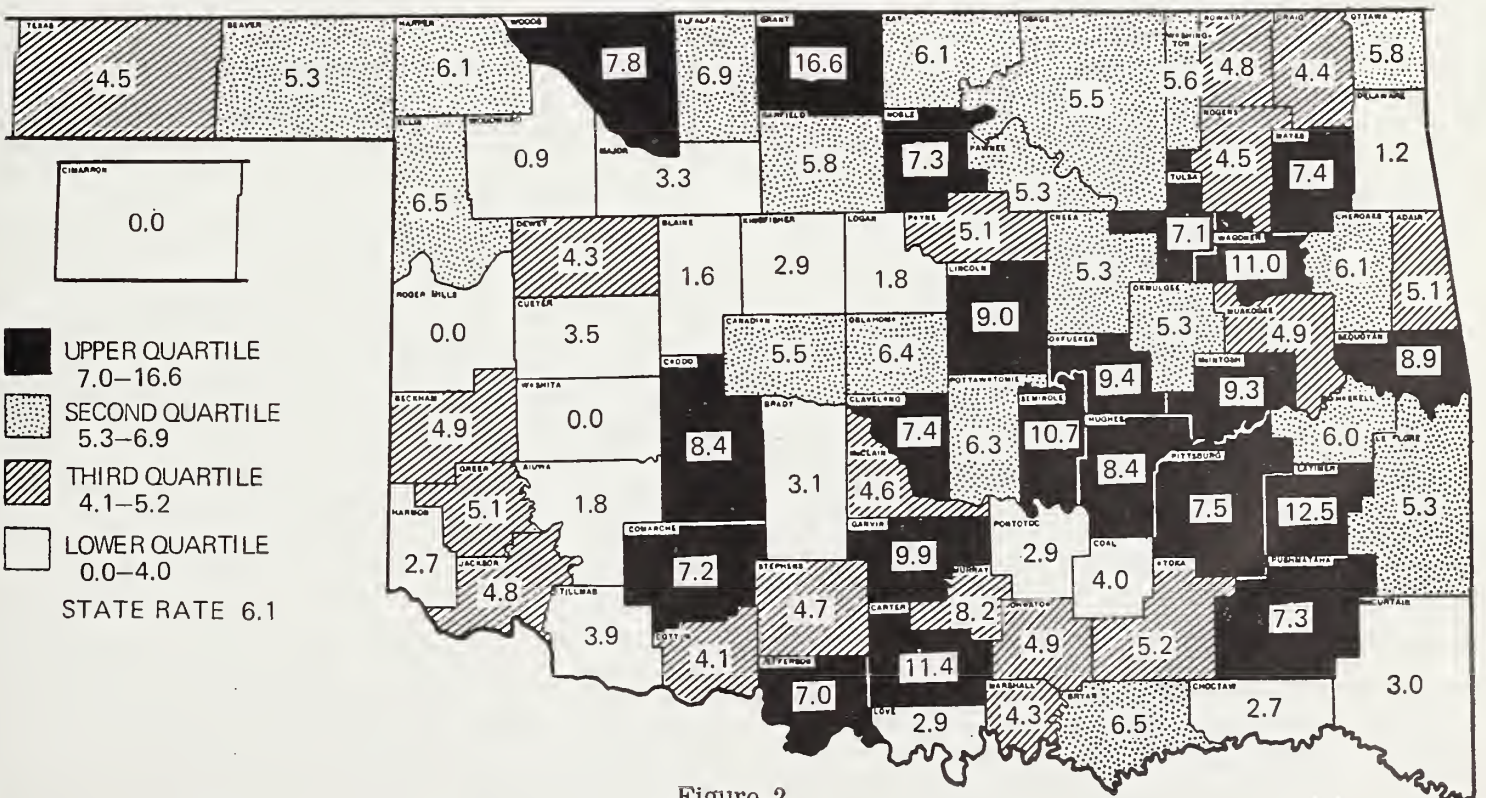


Figure 2

Average annual age-adjusted death rates for cancer of the lung, trachea and bronchus (ISC 162-163), white females.



Table 2  
Age-Sex-Race Specific Death Rates for Cancer of the  
Lung, Bronchus and Trachea (ISC 162-163).  
Oklahoma: 1956-60, 1961-65  
Rates Per 100,000 Population

Age	White Male		White Female	
	1956-60	1961-65	1956-60	1961-65
<5	0.0	0.9	0.9	0.0
5-14	0.0	0.0	0.5	0.0
15-24	2.6	0.0	0.6	0.7
25-34	8.4	13.4	2.9	2.4
35-44	54.0	57.7	11.7	13.4
45-54	238.1	278.0	33.0	53.4
55-64	617.5	747.9	64.1	90.6
65-74	833.0	1117.1	110.8	130.2
75+	674.1	832.4	216.6	254.8
AADR*	170.2	211.6	26.7	34.1

Age	Non-White Male		Non-White Female	
	1956-60	1961-65	1956-60	1961-65
<5	0.0	0.0	0.0	0.0
5-14	0.0	0.0	0.0	0.0
15-24	0.0	6.4	0.0	0.0
25-34	9.2	19.7	7.6	0.0
35-44	76.6	81.5	0.0	16.7
45-54	179.6	200.1	52.7	16.9
55-64	388.9	441.9	102.1	90.5
65-74	427.9	617.2	110.1	132.8
75+	424.2	373.3	208.5	222.7
AADR*	109.9	130.3	30.9	28.9

\*AGE ADJUSTED DEATH RATE Based on the 1960 State White Males as the Standard Population.

doubled for all groups (Table 1).

#### GEOGRAPHIC DISTRIBUTION

The geographic distribution of age-adjusted mortality by county for cancer of the lung, trachea and bronchus among white males shows the disease to be more prevalent in the northeastern counties of the state extending from Ottawa county in the northeastern corner to Hughes county in the east central. Adjusted rates belonging to the second quartile counties appear in the southern geographic area of the state, the

southeastern and southwestern counties. Rates belonging to the lower quartile appear together in the panhandle area (figure 1).

The white female geographic distribution shows the disease to be more prevalent in the east central counties of the state while low counties favor the western third of the state (figure 2).

Cigarette sales in Oklahoma have continued to increase from 93.5 packs per capita in 1950 to peak sales of 118.9 in 1961 and declined to 115.9 in 1966. The data show that Oklahomans buy fewer cigarettes than the national average.<sup>1</sup> The geographic distribution of cigarette sales by districts in Oklahoma shows the districts including Tulsa and Creek counties to have the highest average annual tax paid per capita sales, followed by the Oklahoma and Canadian county district. The next four districts with substantially high sales are located in the southern districts extending from areas in the west to the eastern portion of the state. It is of interest to report that the northeastern districts where some of the counties with highest lung cancer death rates in males were found, reported the lowest per capita sales of cigarettes in Oklahoma for the period studied (figure 3).

The mineral map of Oklahoma<sup>1</sup> shows the principal limestone and dolomite area covers the northeastern geographic area of the state. Also of interest is the chat (silicon dioxide) distribution point and the only zinc lead mine areas are located in Ottawa county north of Miami. Other zinc smelter areas are located in Washington, Kay, and Okmulgee counties.

The fuels map of Oklahoma (figure 4) is of interest because it shows the major resources and production areas. For instance, the area of minable coal and coal mines extends from Craig, Nowata, Rogers, Tulsa and Wagoner counties in the northeast to Okmulgee, Muskogee, McIntosh, Sequoyah, LeFlore, Haskell, Latimer, Pittsburg and Coal in the east central. The map also shows Oklahoma to have 21 petroleum refineries located in the central counties extending from the northern counties to the southern counties. The same areas seem to have numerous natural gasoline plants; two carbon black plants are in operation, one in Texas county and another in Kay county.



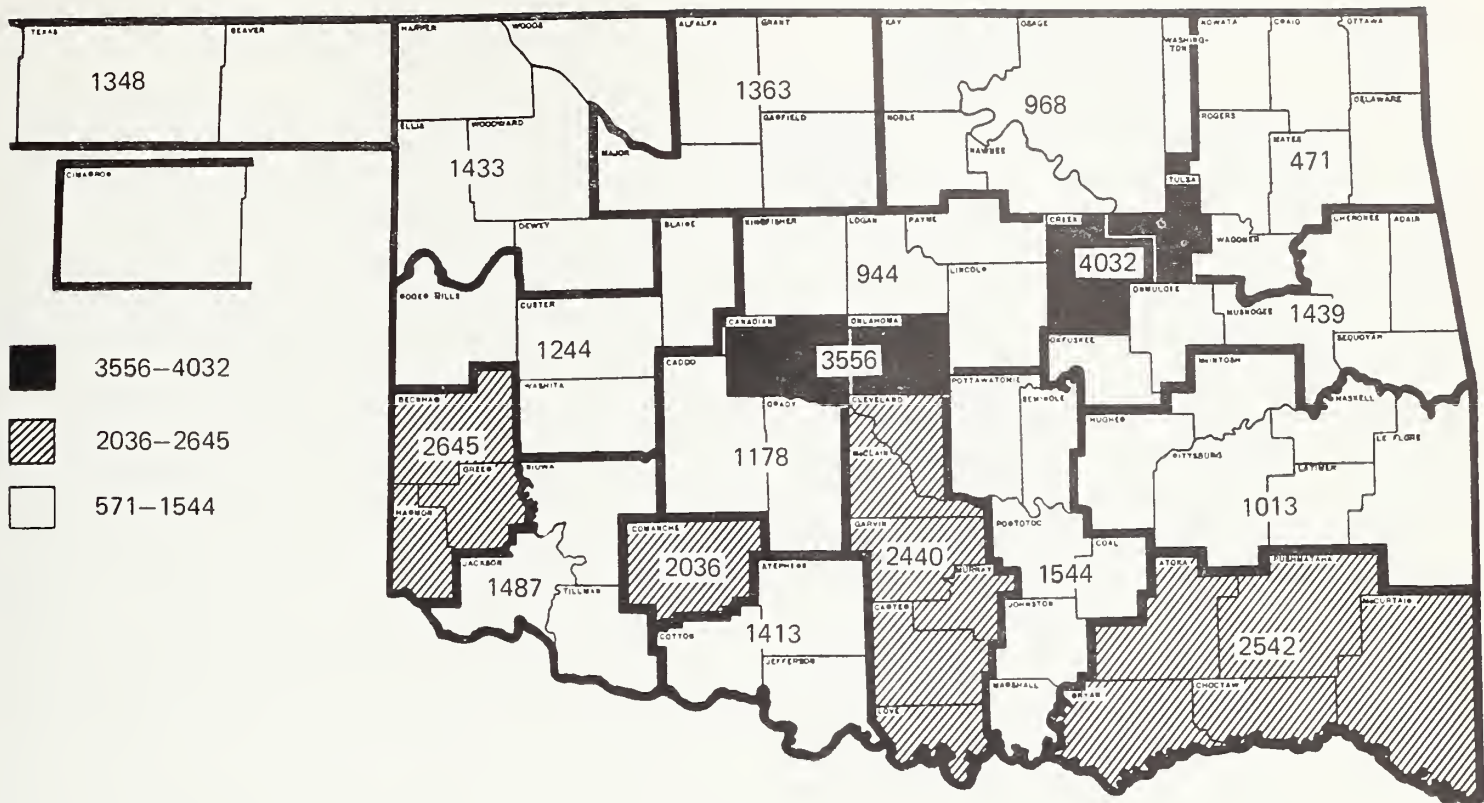


Figure 3  
Average annual tax-paid per capita sales of cigarettes in Oklahoma, 1960-1961, 1965-1966.

Solid hydrocarbon deposits are located in the four-county-area of Atoka, Pittsburg, Pushmataha and LeFlore. While the rock asphalt quarry or deposits are present mainly in Pontotoc, Murray, Stephens, Carter, Love, and Marshall. Uranium is reported to occur in the southwestern counties of the state.

The urban-rural distribution of Oklahoma

residents by county (figure 5) shows the metropolitan counties to be located in the northeast (Tulsa, Washington, and Muskogee counties), the north central (Kay and Garfield), the central (Oklahoma, Cleveland, and Pottawatomie counties), and the south central (Comanche and Carter counties). The rural counties favor the western third of the state including the panhandle area. Cancer

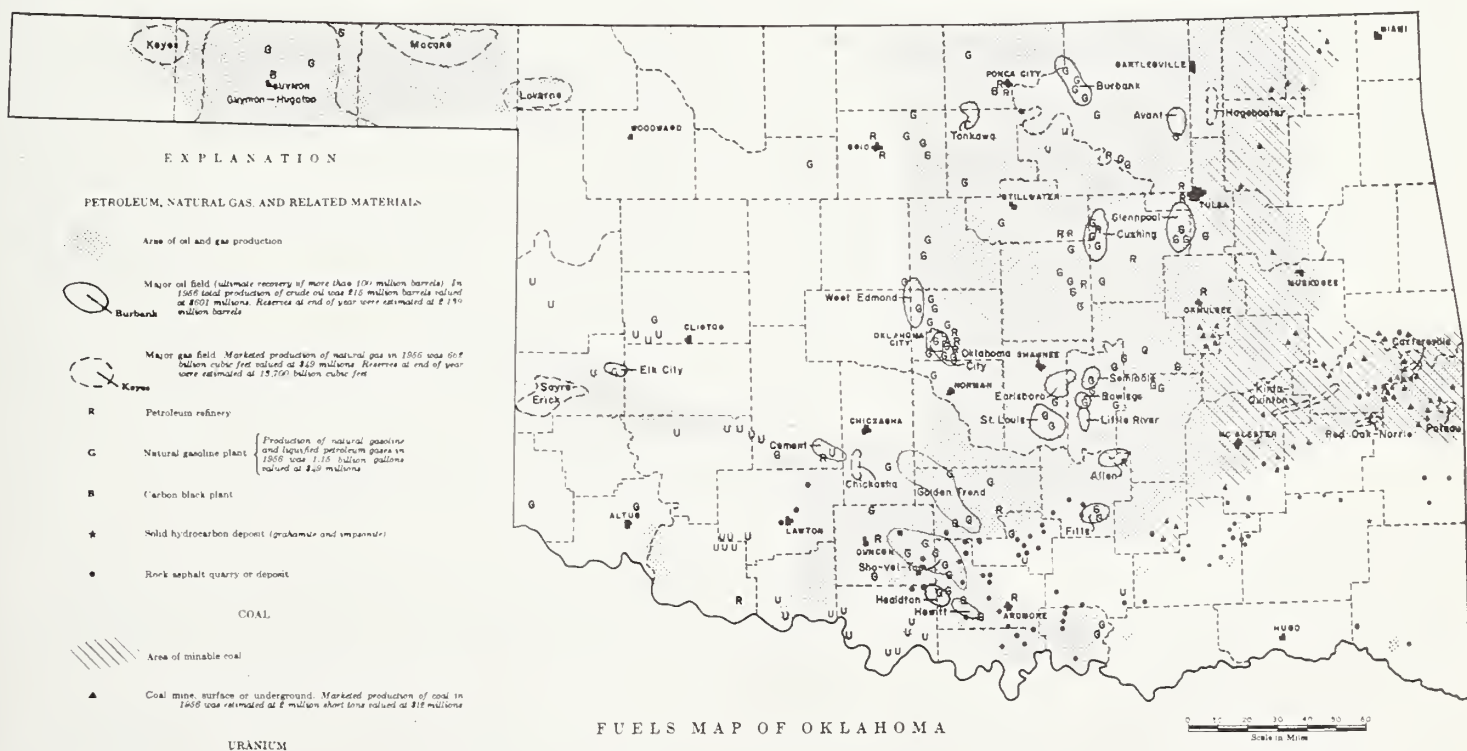


Figure 4 Fuels maps of Oklahoma, 1957.



of the lung, trachea, and bronchus occurs more frequently among the non-metropolitan population than the metropolitan or rural (Table 3). These differences are significant for both males and females. The correlation between the white male and female death rates was significant for cancer of the lung, trachea, and bronchus, as determined by rank correlation. (Table 4)

#### DISCUSSION—SECULAR TRENDS

The secular trends of adjusted mortality from cancer of the respiratory system in Oklahoma for the two five-year periods studied are consistent with the trends reported for the rest of the United States.<sup>14</sup> In considering secular changes in adjusted mortality from cancer of the respiratory system in Oklahoma several factors will have to be considered as possibly affecting these changes. The change may be due to improvement in diagnosis, survival experience of patients, the aging of the population, changes in classification of the cause of death or a true change in the incidence of the disease.<sup>10</sup> The changes reported for any specific site are the net results of these factors.

The most probable reasons for changes in secular trends are those due to improvement in diagnosis; however, this may be very difficult to assess. Improvement in diagnosis may have influenced slight changes in any specific site; however new factors introduced into the human environment such as air pollution and cigarette smoking are responsible for dramatic changes. It is important to note that the practices of classifying the cause of death on the death certificate in Oklahoma have not changed during the ten-year period studied.

As for cancer of the lung, trachea, and bronchus, the dramatic increase in the disease is probably due to new factors introduced into the human environment. The increase in mortality is reported for every age group among the white population and for most age groups among the nonwhites. To say that the increase is due to improvement in diagnosis alone we would have to assume gross misdiagnosis in the past on the part of Oklahoma physicians.

The mean incubation period for cancer varies from one site to another and is in the order of forty years for cancer of the lung.<sup>10</sup> Therefore, we must look at factors introduced into the human environment shortly after the turn of the century. The report of the surgeon general on smoking<sup>13</sup> indicates a dramatic increase in per capita consumption of cigarettes for the United States that began since the turn of the century. The per capita sales of cigarettes and probably consumption in Oklahoma have increased during the last sixteen years. No data are available previous to 1950 for Oklahoma, but since the trends in cigarette sales since 1950 are consistent with the national trends, it is then reasonable to assume that the increase reported for Oklahoma since 1950 has begun since the turn of the century and has influenced the rising trend of lung cancer mortality in Oklahoma.

No data are available to measure the increase in air pollution for Oklahoma; however, about 78 percent of the Oklahoma counties have decreased in population between the last two censuses. At the same time the ten metropolitan counties, where the degree of air pollution is greater, have gained. This may have contributed to the rising trends in cancers of the respiratory system other than larynx.

It is interesting to note here that the

Table 3  
Mean Average Annual Age-adjusted Death Rates by Sex of White Population and Degree of Urbanization for Oklahoma Counties, 1956-1965.

Cancer Site	Sex	Degree of Urbanization			Kruskal-Wallis Test Chi-Square Value
		Metropolitan Mean	Nonmetropolitan Mean	Rural Mean	
Lung, Trachea and Bronchus	Male	34.6	38.6	31.8	16.17***
	Female	6.2	6.0	5.1	11.28**

Chi-Square Values

\*\*\*p < 0.001

\*\*p < 0.01



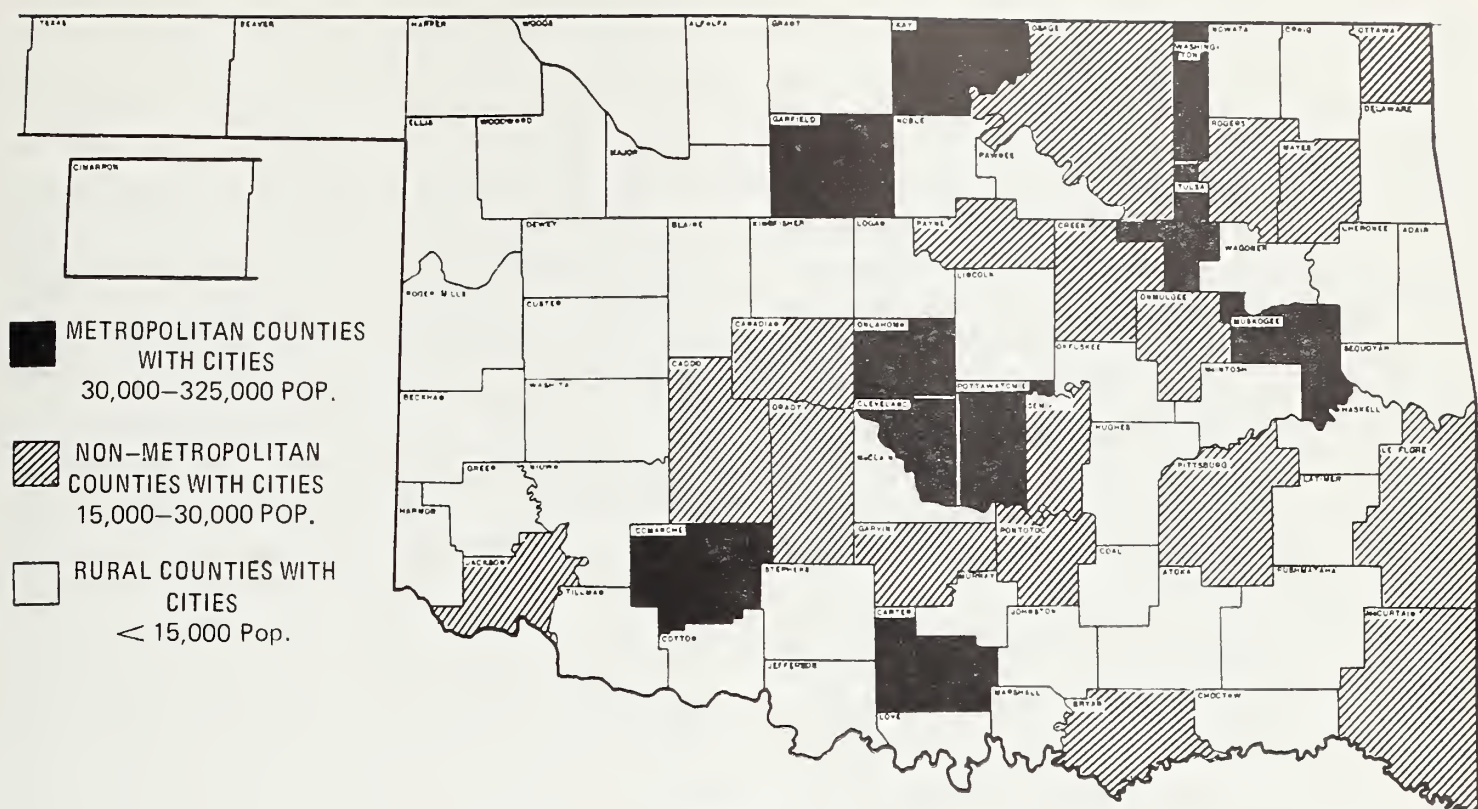


Figure 5  
Urban-Rural distribution of Oklahoma counties (1960).

urban-rural differences for lung, trachea, and bronchus cancer are highly significant ( $p < .001$ ) for the white male population and significant ( $p < 0.01$ ) for the female population. Lung, trachea, and bronchus cancer was less prevalent in the rural counties.

It is improbable to assume that genetic factors are responsible for changes in secular trends, since the genetic constitution of the Oklahoma population could not have changed in such a short period of time.

#### SEX DIFFERENCES

In the United States, mortality from cancer of the larynx, lung, bronchus, and trachea is higher in males than females.<sup>10, 14</sup> The mortality experienced by the two sexes in Oklahoma is consistent with these reports.

In attempting to explain these sex differences it was suggested by Lilienfeld<sup>10</sup> that either males are more predisposed to cancers of the respiratory system or that males are more exposed to environmental carcinogens. He also noted that cancer sites most frequent-

ly occurring among males are those in the upper end of the respiratory and digestive tracts which are under heavy exposure to external factors. We should also mention that certain human habits such as smoking and occupations render the male more exposed to some carcinogens than the females. Most occupations where the risk of lung cancer mortality is increased are predominantly male occupations such as mining.

#### RACIAL DIFFERENCES

The nonwhites experienced lower mortality rates from cancer of the lung, trachea, bronchus and mediastinum, and thoracic cavities, than the whites, but approximately equivalent rates for cancer of the larynx.

It is difficult to interpret these age-adjusted differences as the nonwhite population of Oklahoma is not homogeneous and constitutes two different racial groups. The Negro population predominates in the metropolitan counties and the Indian population resides mostly in the rural counties. It is reasonable to assume that the availability of medical care for the Negro and Indian groups is not the same nor are they similar to the white population. In dealing with racial groups several factors will have to be considered, one of which is the genetic constitution of the population. Others are personal habits, socioeconomic and occupation oppor-

Table 4  
Kendall Rank Correlation Coefficient of Average Annual Age-adjusted Death Rates for Oklahoma White Males and Females (1956-1965)

Cancer Site	Kendall Rank Coef.	Z
Lung, Bronchus and Trachea	0.20641	2.656*

\* $p < 0.005$



tunity. Since the nonwhite population of Oklahoma is small and heterogeneous, the rates are not very stable and few deaths may give a very high rate. Therefore, we shall refrain from drawing general conclusions from these data.

#### GEOGRAPHIC VARIATIONS

The industrial environment is very important to consider in explaining geographic variations in mortality from cancer of the respiratory system as workers are exposed to cancer producing substances in certain occupations. The association between excessive risk of lung cancer and exposure to radioactive ore mining, nickel refining, chromate, asbestos, gas or tar is definitely established. 4, 5, 6, 10, 11

The mineral map of Oklahoma shows the northeastern geographic area of the state characterized by limestone and dolomite topography. Cancer of the respiratory system is more prevalent in these areas. The only zinc-lead mine area and chat (silicon dioxide) distribution points are located in this area in Ottawa county north of Miami. Ottawa county experienced the second highest age-adjusted death rate from cancer of the lung, trachea and bronchus (50.0/100,000). Other zinc smelter areas are located in Washington and Okmulgee counties where the prevalence of respiratory malignancies is high.

The fuels map of Oklahoma shows the area of minable coal and coal mines to extend from Craig, Nowata, Rogers and Tulsa counties in the northeast, all belonging to the area of highest lung cancer prevalence to Okmulgee, Muskogee, McIntosh, Sequoyah, LeFlore, Haskell, Latimer, Pittsburg, and Coal counties in the east central. Most of these counties have experienced lung cancer mortality of the highest or second highest quartiles.

The central area of the state extending from the northern counties to the southernmost counties have located in them more than nineteen petroleum refineries and numerous natural gasoline plants. It is also of interest to mention here that most of Oklahoma metropolitan and non-metropolitan counties are located in this belt. It is difficult to assess the pollution of the air

from these and other industries as no data are available, but we can say that such an industrial environment may have contributed something to the complex etiology of cancer of the respiratory system in Oklahoma. The urban-rural differences (Table 3) for cancers of the lung, trachea, and bronchus are highly significant ( $p < .001$ ). However, the mean average annual age-adjusted death rates by sex and degree of urbanization for the white males show a higher rate for the non-metropolitan counties (38.6), than the metropolitan (34.6) or the rural (31.8). This could be explained by lumping Tulsa and Oklahoma counties with lesser metropolitan and by the fact that many of the industries are located in the non-metropolitan counties. The difference between the non-metropolitan counties and the rural counties is indeed large. Whether these differences are true differences because of factors in the human environment or due to availability of medical care and improvement in diagnosis is difficult to say.

Smoking habits are most difficult to evaluate from sales data. For instance, the lowest per capita sales of cigarettes districts are areas highest in mortality from cancer of the respiratory system, cancer sites where the association between cigarette smoke and cancer has been established. Several questions will have to be raised here. One concerns the sales of cigarettes. Is the low sale of cigarettes in an area an indication of low consumption or is it an artifact? Do people in the different districts buy their cigarettes from Oklahoma or cross over to bordering states? Does the fact that the metropolitan counties of Tulsa and Oklahoma have the highest sales, an indication of higher consumption or just sales to commuters residing in neighboring counties? The data on cigarette sales covers a very short period of time and may not be in any way near the true picture of tobacco sales 20, 30, or 40 years ago. It is of interest to note that counties with high sales of cigarettes, excluding the Tulsa-Oklahoma city areas, are located in the southern most counties bordering Texas. Cross over from Texas to Oklahoma may have accounted for the high average of sales in the southern counties or lack of cross over in the southern counties accompanied by cross over from Oklahoma



to other states in the northeast districts to have accounted for the per capita sales differences.

Since the etiology of lung cancer is still a controversial topic we can only speculate about the decline in age specific death rates after age 75. This trend is not true for other forms of cancer. Assuming that habits such as smoking or occupational exposure to carcinogens begin at an early age, say 18 to 25, and the onset of the disease is 20 to 40 years later, then the decline after age 75 can be explained. The cohort approach to lung cancer mortality does not show a decline in age specific death rates after age 75.<sup>10</sup>

The Kendall rank correlation of male and female death rates by county for lung, trachea and bronchus cancer was too small (0.20041) to be meaningful, but has a significant Z value of 2.666 probably due to a large sample size of 77.

In conclusion we can say that many factors may be responsible for the excessive risk in mortality from cancer of the respiratory system. Environmental factors play a part, but this part is selective to the male population through the industrial environment. Smoking and air pollution also play a role in the excessive risk of respiratory mortality. The high mortality from cancer of the respiratory system in Oklahoma, a rural state, but a leader in the petroleum industry, is a very significant finding.

#### SUMMARY

Mortality from cancer of the respiratory system (ISC 160-165) occurring to Oklahoma residents during 1956-1965 was analyzed. Age-sex-race specific and adjusted death rates were tabulated for 1956-1960 and 1961-1965. Average annual age-adjusted death rates were tabulated for 1956-1960 and 1961-65. The average annual age-adjusted death rates for white males and fe-

males were plotted on county maps. Data on the human environment and personal habits were analyzed. An attempt was made to relate secular change and geographic differences in mortality to factors in the human environment.

The secular trends in respiratory cancer for Oklahoma are consistent with those reported in the rest of the United States. A dramatic increase in cancer of the respiratory system is indicated. This increase may have been influenced by exposure to air pollution and cigarette smoking.

The geographic distribution of adjusted mortality rates shows the disease to be more prevalent in the northeastern counties, an area characterized by limestone and dolomite topography where zinc, lead and coal mining predominates. Among cancer deaths for all groups and for the white males, lung cancer was the leading cause of death. □

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# Congenital Glaucoma

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*Irreversible blindness of congenital glaucoma may be prevented with early recognition by the primary physician and referral for diagnosis and treatment by an ophthalmologist.*

*"Oeil de bouf est une maladie d'oeil quand il est gros et eminent." (Buphthalmos [eye of the ox] is a serious disease of the eye in which it is enlarged and prominent.)—Ambroise Paré (1517-1590).<sup>1</sup>*

THIS SERIOUS ocular disorder of childhood has been recognized for many centuries, with even the classical writers such as Hippocrates, Celsus, and Galen describing "buphthalmos." However, under this designation, they included all diseases and

conditions of the eye in which the globe appears to be enlarged, such as high myopia, anterior megalophthalmos and congenital megalocornea.

It was not until 1869 that von Mural<sup>2</sup> classified the childhood disease with glaucomas. Before and since that time many terms have been applied to congenital glaucoma, including hydrophthalmia and buphthalmia which refer to the most prominent feature of the disease, the distension of the eye resulting in a large and prominent cornea and anterior segment. The preferred term is congenital glaucoma which refers to the primary defect, the decreased outflow of aqueous, the increased intraocular pressure, and the resultant pathology due to the blockage at the angle of the anterior chamber.

## CLASSIFICATION

### A. Developmental Congenital Glaucoma

1. Simple congenital glaucoma. This is the congenital obstruction of the drainage of aqueous humour caused by a primary developmental anomaly of the angle of the an-

<sup>1</sup>From the University of Oklahoma School of Medicine.



terior chamber. This is the most common type of congenital glaucoma.

2. Associated congenital glaucoma. This is the form of congenital glaucoma that is associated with an obstruction to drainage of aqueous caused primarily by a developmental anomaly elsewhere in the eye, *e.g.*, aniridia, corneal leucomata and staphyloma, mesodermal dysgenesis of the anterior segment, microcornea, megalocornea, spherophakia, encephalo-ophthalmic dysplasia, neurofibromatosis, hemangiomas, and other anomalies having in common an anterior chamber that is often shallow and sometimes non-existent. The genetic pattern of this type of congenital glaucoma is that of the primary anomaly.

Also within the category of associated congenital glaucoma are those found in certain generalized syndromes, such as von Recklinghausen's disease, Sturge-Weber syndrome, Marfan's syndrome, Turner's syndrome, Lowe's syndrome and many other congenital anomaly syndromes.

#### B. Secondary Congenital Glaucoma

Congenital glaucoma may occur as a complication of another fetal disorder, such as fetal or neonatal uveitis or keratitis, or neoplasm. Uveitis, as a cause of congenital glaucoma, is most frequently associated with maternal syphilis or rubella. The most common congenital tumors causing congenital glaucoma are retinoblastoma and diktyoma.

#### INCIDENCE AND ETIOLOGY

This paper deals primarily with simple congenital glaucoma which is thought to be transmitted as an autosomal recessive trait. Its pattern of inheritance has been studied best in Europe where accurate records of pedigree are available. In families with a high incidence of congenital glaucoma, there was also a high degree of consanguinity, and, thus, the inheritance pattern could be developed. Although the autosomal recessive

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pattern is the most common mode of inheritance, some pedigree studies have shown that a pattern of inheritance may be autosomal dominant, or at least pseudo-dominant.<sup>3, 4</sup>

Congenital glaucoma is not a rare disease; it occurs in about five out of every 10,000 live births and makes up approximately 0.01 percent to 0.04 percent of all ophthalmic patients in America, with the male to female ratio being about two to one. Although the incidence is not great when compared to other congenital problems, its significance is apparent; five percent to 13 percent of persons in schools for the blind have had congenital glaucoma. The cost of misdiagnosis and mismanagement of this disease in early infancy is indeed tremendous when the long range problems of special education and care of these patients are considered. It is the pediatrician and general practitioner who have the first contact with these patients and, therefore, have the greatest opportunity to reduce the consequences of misdiagnosis.<sup>4, 5</sup>

#### PATHOGENESIS

Much controversy has been generated in considering the pathogenesis of simple congenital glaucoma. However, most of the theories of pathogenesis center on anterior chamber angle anomalies. In 1895, Cross and Collins,<sup>6, 7</sup> noted the presence of abnormal tissue in the angle of the anterior chamber. Others found abnormalities in the development of Schlemm's canal, or incomplete separation and persistent adherence of the iris and cornea. Theories on the pathogenesis of congenital glaucoma have stimulated much investigation. Currently, the controversy centers on two main theories of pathogenesis.<sup>8</sup>

Otto Barkan, in his search for the cause of congenital glaucoma, turned his attention to the angle of the anterior chamber and, with the technique of gonioscopy, he observed the angles of children with congenital glaucoma. His findings are best described in the following statements from his original paper on the pathogenesis of congenital glaucoma:

"Gonioscopically, a transparent membrane has been observed occupying an approxi-



mately vertical plane in contrast to the oblique plane of the normal angle wall. The surface exhibits a delicate stippling or shagreen. When examined with the microscope and illuminated obliquely or by transillumination with the hand slit lamp, the shagreen continues onto the stroma of the iris and partially covers the crypts. It is suggested that it represents the endothelium . . . The surface is usually semi-translucent but shows variations from a rather strongly reflecting surface to a moderate translucency. When this cellophane-like material has been removed or divided by goniotomy, some tendrils of uveal tissue may be seen crossing the space behind it; the true angle wall is seen in depth.

"The impediment to outflow appears to consist in the changes described in the foregoing since division of the semi-translucent delicate membrane by goniotomy and recession of the iris root results in normalization of the pressure."<sup>9</sup>

Otto Barkan, therefore, implied that the pathogenesis of congenital glaucoma was due to a persistent membrane in the angle of the anterior chamber. Others later expanded his original theory to include the ideas that this membrane was a normal finding in the developing eye, its presence in congenital glaucoma was an indication that a normal mesodermal structure was not reabsorbed as the eye developed, and congenital glaucoma was a result of a "mesodermal remnant in the angle of the anterior chamber."<sup>8, 10</sup>

Other investigators could not demonstrate this membrane histologically and, hence discounted his theory. One of the most outspoken of the dissenters is A. Edward Maumenee,<sup>11</sup> who in the introduction to his paper on the pathogenesis of congenital glaucoma states that the elevated intraocular pressure is not due to:

" . . . (1) an absence of Schlemm's canal, (2) *an unabsorbed mesodermal tissue or membrane over the trabecular fiber\**, (3) a block of the filtration angle by adhesions of the iris to the trabecular fibers, although there are a few cases in which this

may be a factor, or (4) a defect in the collecting channels, deep scleral plexus of blood vessels, or vortex veins."

Maumenee contends that in congenital glaucoma "there is a faulty cleavage of the iris and the ciliary body from the trabecular fibers." This, however, does not explain the decreased outflow of aqueous, and he accounts for this decrease in the following manner:

" . . . (1) the ciliary processes and ciliary body are pulled centrally in some cases, possibly due to a microphakia or relative microphakia, (2) an endothelial lined Schlemm's canal can be found in most cases of congenital glaucoma, and (3) the abnormal insertion of the longitudinal muscles of the ciliary body into the cornealscleral trabecular fibers of the scleral spur is in some way responsible for the decreased facility of outflow."

He later modified his theory by stating that the abnormal insertion of the longitudinal muscles of the ciliary body into the cornealscleral trabecular fibers placed an abnormal stretch on these fibers, thus closing the normally open pathways of aqueous drainage. This was demonstrated by the fact that the cleavage of the muscle fibers from the trabecular fibers, following goniotomy, resulted in a re-insertion of these fibers on a new artificial cornealscleral spur. This was the mechanism, he believed, whereby pressure is normalized following goniotomy, and not the mechanism of interruption of a persistent membrane.<sup>12</sup>

Many papers have been written, pro and con, on each of the above theories of pathogenesis of congenital glaucoma. One of the most extensively researched works is that of J. G. F. Worst,<sup>10</sup> who carried out extensive studies of the normal and congenital glaucoma eye of newborn patients going to surgery for causes not related to ophthalmology. He also has investigated the development of the eye in stillborns, premature stillbirth fetuses, and early abortions. His studies included gonioscopy, microdissection, and histologic sections of these eyes. He confirmed many of the observations of Barkan, especially those dealing with a "mesodermal remnant" and the "shagreened membrane." He attempted to reconcile the two theories of Barkan and Maumenee; to point

\*Italic is author's.



out the similarities in the two theories. He, however, discounted the "cleavage" theory of Maumenee since he found no evidence of a cleavage plane in the developing eye.

Much work is continuing in search of the pathogenesis of congenital glaucoma, and perhaps, a theory explaining the findings of both of the above workers will soon be proposed.

#### SIGNS AND SYMPTOMS

As mentioned above, the general practitioner and the pediatrician have the first contact with the patient who has congenital glaucoma. It is for this reason that they must be aware of the signs and symptoms of the disease if they are to facilitate rapid diagnosis and treatment and, thus, reduce the tragedy of misdiagnosis and late treatment.

The signs and symptoms of congenital glaucoma are almost entirely related to the increased intraocular pressure caused by the decrease in outflow facility. One of the earliest signs is epiphora (excessive tearing). It has been stated by some ophthalmologists that epiphora alone, in the newborn, is sufficient reason for a complete diagnostic evaluation.

Other early signs, photophobia and blepharospasm, as well as epiphora, may be related to the irritation of an edematous cornea caused by the intraocular pressure elevation. These signs decrease rapidly as the intraocular pressure is brought under control.

Corneal haziness secondary to the corneal edema is often the first sign that brings the infant to the doctor. In most cases, the corneal edema changes as the intraocular pressure increases and decreases. With the progression of the disease, the stretching and corneal edema lead to a more or less permanent pattern of irregular corneal opacities.

Corneal enlargement, resulting in the typical "buphthalmos" (ox-eye) appearance, is due to the relative elasticity of the infantile cornea and sclera compared to that in the adult. Until about the age of three, the infants cornea and sclera is distensible. Therefore, if the rise in intraocular pressure occurs after the age of three, the child with

glaucoma will not develop the typical "ox-eye" appearance.

Another early sign of congenital glaucoma is that of tears in Descemet's membrane which occur because of the decreased elasticity of the membrane as compared to the overlying corneal stroma, and the secure attachments of the membrane to the corneoscleral junction. These tears in Descemet's membrane are usually seen first on the peripheral cornea and later in other areas of the cornea. The tears are later filled in with epithelium and give the appearance of a raised glossy membrane surrounded by an opaque ridge.

Other early findings occurring with the stretching of the cornea include a deep anterior chamber.

Because of the elasticity or distensibility of the infantile globe, cupping of the optic disc is not a consistent finding in congenital glaucoma as it is in adult glaucoma.

Late signs of the disease include a permanent corneal haze, prominent eyes, very deep anterior chambers, limbal enlargement, stretching of the zonular ligaments, eventual iridodonesis, and often subluxation of the lens. Such eyes are easily traumatized; corneal ulcers, hyphemas, and rupture of the eye with eventual phthisis bulbi are not uncommon. These late findings are not compatible with a good prognosis; total blindness is usually the result.<sup>13, 14</sup>

In some series, nystagmus has also been reported as a very common finding.

#### DIFFERENTIAL DIAGNOSIS

A. Megalocornea. This is a condition of abnormal corneal enlargement, usually 14 to 16 mm in diameter, often with iridodonesis, but without tears in Descemet's membrane, increased intraocular pressure, or cupped discs, and with a normal angle by gonioscopy. This is a sex-linked disease occurring in males.

B. Trauma. Occasionally in a difficult forceps delivery, injuries may cause rupture of Descemet's membrane with resultant corneal edema and corneal haze. This may persist for a month or more, but it is usually unilateral without corneal enlargement, and the pressure in the affected eye is normal.



C. Secondary glaucoma due to infantile iridocyclitis or keratitis.

D. Intraocular tumors with secondary glaucoma.

E. Metabolic diseases causing a corneal haze, such as Hurler's disease, corneal lipodosis, or cystinosis.

F. Miscellaneous diseases, including idiopathic corneal edema, high myopia with a deep anterior chamber, and conical cornea to name a few.

#### DIAGNOSIS

Although a corneal diameter of 12 mm or greater, the history of epiphora, and tears in Descemet's membrane are considered to be diagnostic of congenital glaucoma, usually a more complete evaluation is needed to establish the diagnosis. A complete examination by the ophthalmologist performed under deep surgical anesthesia, so that maximum relaxation of the intraocular and extraocular muscles can be obtained, includes:

A. Corneal Examination: The diameter is measured and compared to the normal corneal diameter (at birth, 9.5 mm; at six months, 10.5 mm; at one year, 11.5 mm). In addition to the corneal diameter measurement, the clarity of the cornea should be assessed.

B. Anterior Chamber Evaluation: The depth of the anterior chamber should be assessed as to depth, and Descemet's membrane should be observed for tears.

C. Fundus Examination: The disc should be visualized, although as mentioned above, cupping of the disc in congenital glaucoma is not as helpful as in the diagnosis of adult glaucoma. The remainder of the fundus should be examined for tumors and other mentioned causes of glaucoma.

D. Gonioscopy: The angle should be observed and the thickness of the trabecular sheets should be evaluated. The infant with congenital glaucoma has a thickened trabecular meshwork, and, frequently, has a stippled cellophane-like membrane or "sha-greened" appearance as described by Bar-kan. The iris vessels may also appear more prominent, especially if the pressure is ele-

vated. The angle may also appear widened, usually having an angle greater than 45°, with a loss of the normal angle recess which is usually seen in its early formation in most normal newborn eyes.

E. Schiøtz Tonometry. This is the least helpful of the diagnostic steps outlined here, for the abnormal radius of the cornea in congenital glaucoma may render pressure readings inaccurate. The most important use of this test is to determine scleral rigidity, i.e., by taking pressure readings with two different weights and converting these into a coefficient of scleral rigidity. The coefficient may then be eliminated in other types of pressure measurements.

F. Electronic Tonography: This procedure, coupled with gonioscopy, is probably most helpful in the diagnosis of congenital glaucoma. The measurement of outflow facility by this method is usually decreased to the range of 0.05 to 0.15, with a normal coefficient of outflow facility being 0.18 or above. Fewer than 2.5 percent of the normal population have coefficients of outflow facility lower than 0.18, and not more than 0.15 percent have outflow coefficients lower than 0.13.<sup>13, 14</sup>

#### TREATMENT

The treatment of congenital glaucoma differs greatly from that of adult, chronic, simple glaucoma. In adult glaucoma the treatment is primarily medical, with surgery being reserved for those cases which fail to respond to miotics and other pressure lowering agents, or in those cases which show a progressive loss of vision or visual field despite maximum medical treatment. However, in congenital glaucoma the treatment is primarily surgical, with miotics, carbonic anhydrase inhibitors, and osmotic agents being used only temporarily to lower pressure until surgery can be done.

The surgical treatment of choice, goniotomy, is not a new procedure. In 1895, de Vincentiis<sup>15</sup> reported 76 cases of adult glaucoma who were so treated. In his original paper, he stressed the harmlessness of this type of surgical intervention, but he also stated that the hoped for results were not obtained. Later, he attempted the same surgical technique on an infant with congenital



glaucoma and achieved an excellent result. The operation was abandoned, however, since it did not prove to be an effective treatment of adult glaucoma.<sup>8</sup>

It was not until 1936 that the surgical technique first described by de Vincentiis was revived by Otto Barkan.<sup>16</sup> The Barkan operation consists of an incision of the trabecular meshwork in front of Schlemm's canal under direct visualization with the magnification gonioscope. The first patient to be operated by Barkan was an eight and one-half-month-old male with congenital glaucoma. A rapid decline in intraocular pressure was obtained, and five years after surgery, the boy still had normal intraocular pressure and normal vision. This surgical procedure, and minor modifications of it, has now become the treatment of choice.

There is still much controversy as to why the operation is successful, whether it is by incision of a membrane covering the angle, or whether it is by separation of the ciliary muscles from their abnormal insertion on the trabecular meshwork and a normal reinsertion on the cornealscleral spur. Regardless of the mode of action, its effectiveness cannot be questioned.

The only limiting factor of this treatment is in the patient whose diagnosis has been made late in the course of the disease and the eye is stretched to a corneal diameter of 14 to 16 mm. If surgery is attempted in this late stage it may result in severe complications, for even "the most minor surgical procedure can be followed by retinal detachment, intraocular hemorrhage, atrophy of the eye, dislocation of the lens, and other serious sequelae."<sup>17</sup>

#### PROGNOSIS

Prognosis in the treatment of congenital glaucoma depends primarily on the early diagnosis and treatment of the disease, and the age of onset of the disease. If a child is born with signs of congenital glaucoma, elevated pressure, hazy cornea, or large corneal diameter, less than half of those treated will obtain a cure from goniotomy. Other factors related to this are the corneal diameter, as mentioned above, and the condition of the optic nerve head.

If the disease is not manifest until the second to the ninth month of life, the chances for a cure following goniotomy, if done early in the course of the disease, approaches 80 percent.

Although, as mentioned above, the chance of successful results in the 14 to 16 mm eye is very poor, many advocate operation of the eye after the pressure has been lowered by osmotic agents, carbonic anhydrase inhibitors, or other such agents. Some of these advocates have reported success in ten to 15 percent of operated cases. They argue that since prognosis, if untreated, is blindness, any attempt to normalize the pressure and thus save vision, is justified.<sup>13, 14</sup>

#### SUMMARY

An attempt has been made to demonstrate the magnitude of congenital glaucoma, both in incidence and problems of care if untreated. The hereditary pattern of simple congenital glaucoma is primarily an autosomal recessive trait, although other patterns of inheritance have been implicated. The pathogenesis of the disease is still under question. The two main theories of pathogenesis have to do with (1) "a persistent endothelial membrane over the angle with a persistence of mesodermal tissue in the angle, and (2) an "abnormal insertion of the longitudinal ciliary muscles into the trabecular meshwork."

Because early diagnosis is important, the major signs and symptoms of the disease, i.e., epiphora, photophobia, blepharospasm, corneal haziness, corneal enlargement, and tears in Descemet's membrane, have been described, and the steps of diagnosis, i.e., examination under anesthesia, corneal examination, anterior chamber evaluation, fundus examination, gonioscopy, Schiøtz tonometry, and electronic tonometry, have been outlined.

The treatment of choice in congenital glaucoma is goniotomy, with prognosis depending upon the time of onset of the disease, the time of diagnosis, and the stage of surgical intervention.

In conclusion, early diagnosis by the general practitioner and the pediatrician, who have first contact with the patient, is



imperative if early treatment is to be instituted and vision preserved.

#### ACKNOWLEDGMENT

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## UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE COURSE

### MASKED HOMICIDE—THE MEDICAL-LEGAL INVESTIGATION OF SUDDEN DEATH: THE DOCTOR AND THE LAW

OCTOBER 24th-25th, 1969

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The course will present illustrative material dealing with techniques employed in the discovery of the subtle homicide and with the proper investigation of patterns of traumatic injury. The toxicological effects of some common poisonings will be presented. The doctor's complex legal relationship to his community will be defined with discussion centering on various topics of current interest (professional liability, negligence, informed consent, etc.).

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Further information on this course may be obtained from the Office of Postgraduate Education, University of Oklahoma Medical Center, 800 N.E. 13th Street, Oklahoma City, 73104.



## Medicare Regs Hit Teaching Hospitals

Physicians practicing in Oklahoma's 12 teaching hospitals have had their Medicare payments temporarily suspended and payment of future claims will be subject to audit.

The action came as a result of new regulations issued in April by the federal Bureau of Health Insurance.

Under the existing arrangement for paying physicians to care for Medicare beneficiaries, interns and residents are paid through the hospital where employed (Part A of the Medicare Act) while attending or supervising physicians are eligible for payment under Part B of the law.

However, Medicare officials have questioned whether or not attending or supervising physicians have been actually performing medical services to teaching cases for which they have billed Medicare. In other words, federal officials apparently believe that care is being rendered in some cases exclusively by house staff physicians, and that teaching physicians have been paid for work not performed.

The problem came to light at an August 21st meeting with representatives of the Bureau of Health Insurance at the Department of Public Welfare office in Oklahoma City. Attending the meeting were chiefs of staff and administrators of the 12 teaching hospitals plus representatives of the OSMA and the osteopathic association.

BHI representatives demanded that payments to all staff members of the teaching hospitals be suspended until such time as an administrative plan could be worked out by the Medicare carriers to assure that payments were proper. The guidelines accompanying the directive were deemed totally unworkable by those present, and DPW suspended

payments only after being ordered to do so.

A conference was held the same day by the welfare department, hospital and professional representatives with Senator Henry Bellmon who was in Oklahoma City at the time. Senator Bellmon telephoned Medicare officials in Washington and was instrumental in obtaining a more reasonable program.

It is expected that payments on the backlog of cases will be accomplished soon with a minimum of auditing required. However, future cases will be subjected to periodic audits (about five percent of all claims). The claim forms and the hospital records will be checked to determine the degree of involvement of the attending or supervising physician. The key to the whole affair is to determine that the teaching physician performed a "personal and identifiable" service.

An attending physician's records will need to verify that he:

- 1) Examined or participated in the examination of the patient prior to admission.
- 2) Saw the patient at critical points of his care with sufficient frequency to justify being classed as attending.
- 3) Countersigned significant orders by interns and residents.
- 4) Is the private physician of the patient or the patient is a service patient assigned to him.

The directive further provides that a physician—even though not qualifying as attending—may be paid for personal services, such as consultations, which he may be called upon to perform.

To clear up past cases on which payment has been deferred, it will only be necessary for the carrier to check the presence of the attending physician with sufficient frequency at times during which billed services

were performed. The "get tough" policy, however, will be required henceforth to determine compensability.

It is not expected that the new rules will have any material effect on the compensability of care given to private patients, although the guidelines discussed at the meeting of August 21st would have created havoc in this respect.

In lifting the suspension of payments, the carriers need not wait until all departments are in compliance, but may resume payment on a departmental basis and are permitted as well to resume payment on private patients.

The carrier is required to seek refunds in cases where it is determined that overpayments have been made. □

## Medicaid Faces New Crisis

The Department of Health, Education and Welfare has announced that effective January 1st, 1970, it will no longer provide matching funds for home health services under Medicaid.

Oklahoma has the distinction of having the only program in the nation which will be affected by the directive. Medicaid here provides that a physician may authorize unlicensed persons to be paid by the welfare department for providing non-technical care in the homes of Medicaid beneficiaries.

If the cutback takes place, Oklahoma's Medicaid program stands to lose about \$10 million, and it will undoubtedly be necessary to curtail payments to other providers of service.

Moreover, most of the people who work with Medicaid patients at home are so economically marginal that loss of income will force many of them on the welfare rolls. □



## Insurance Review Cases Abstracted

OSMA's Medical Insurance Review Committee met on August 24th to consider a number of cases. These cases are abstracted here, without names, to give OSMA member-physicians an idea of the type of questions that are brought to the committee.

Purpose of the Medical Insurance Review Committee is to seek the objective reconciliation of unusual medical insurance claims involving members of the OSMA and health insurance coverages which offer payment of customary and reasonable fees. The committee offers both the physician and the insurance carrier an impartial body which will judge whether the claims should be paid as charged, reduced, or not paid at all.

Discipline of OSMA members is not a function of the review committee. However, it does have the obligation to file charges with the association's Grievance Committee, or Board of Censors of a County Medical Society, when warranted by the circumstances of a particular case involving the conduct of an association member.

### Case Abstracts

Case I: A physician billed for 39

visits to a patient in an extended care facility over a period of 39 days. The insurance carrier requested the committee's opinion as to the necessity for daily ECF calls. The doctor justified the calls by stating that it was the policy of the facility to require physicians to visit their patients twice each day. The committee recommended a cut in the number of visits to be compensated and pointed out to the physician that a "set and inflexible policy, such as this one, creates difficulties for the insurance carrier, the facility, and the physician. Further, visits to a patient outside of a hospital should be made only on the basis of medical need."

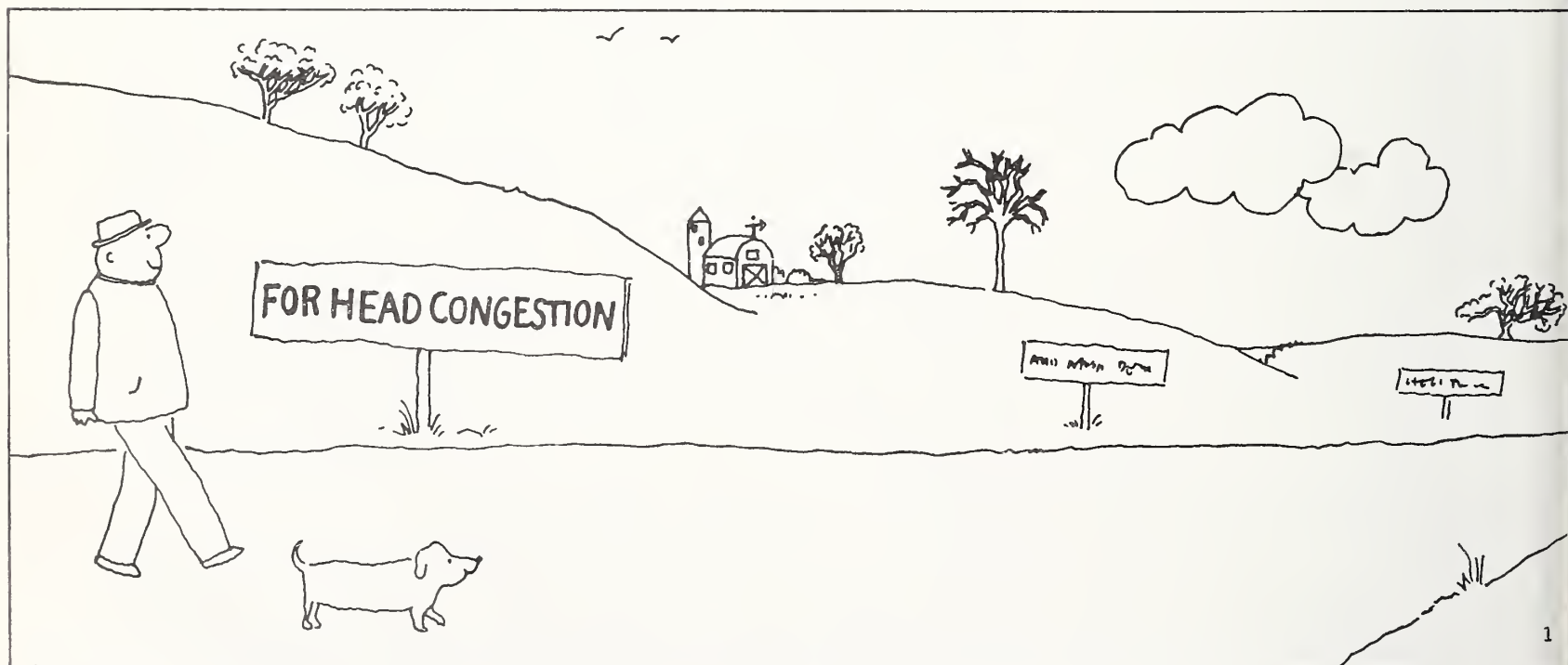
Case II: The patient was a 76-year-old female suffering from cerebral artery occlusion, marked emphysema, and recurrent phlebitis in both legs. During a seven-month period the physician saw the patient 128 times for a few chest x-rays and a large number of IPPB treatments. Following an explanation by the physician of his handling of the case, the committee recommended that the carrier pay the physician's charges as billed since the frequent treatments were deemed medically necessary.

Case III: The patient in this case was severely burned and required extensive reconstructive surgery. The carrier questioned the charges

of the physician and asked the committee to hear the case. During the committee meeting it was revealed that there had been very little communication between the carrier and the physician in advance of the meeting. The committee admonished the carrier for not contacting the physician directly and attempting to settle the claim. It also recommended that the claim be paid as billed.

Case IV: The physician billed over \$1000 for a surgical procedure, but put a minimum amount of description on the claim form. The carrier contacted the physician twice and asked for additional information. The physician answered neither inquiry. After the carrier requested the hearing before the Insurance Review Committee, the physician furnished the required information. Although recommending that the charges be paid as billed, the committee noted that the physician had failed to answer two inquiries for information which would have prevented the case from coming up. In a letter to the physician it stated, "When physicians fail to answer legitimate inquiries, they do a disservice to the entire profession."

Case V: In this case the physician had billed for services to his patient and simply marked his statement "professional care." There was no explanation of what treatment had





been given to the patient. The carrier requested additional information about the treatment and the physician responded with a letter explaining the patient's condition. When notified that the case would be heard by the review committee, the physician sent the committee a complete letter of explanation. However, the committee recommended that the charges be cut to one visit per week and that the physician be admonished for not providing adequate information to the carrier in order to justify the medical necessity for the visits.

Case VI: In this case a female patient was suffering from rheumatoid arthritis and the physician was billing the carrier for a large number of injections of Acthargel. The carrier requested more information and the physician responded with an explanation. However, the carrier then requested a review by the committee and stated, "after consideration of the information available it is felt a medical opinion will be needed as to the proper benefits payable" in this case. After reviewing the case it was the opinion of the committee that it was a legitimate question even though the physician had furnished adequate information. It was the finding of the committee that the frequent injections were medically necessary and that the physician should be paid as billed. (The physician had ex-

plained that the patient had been on cortisone therapy to the extent of destruction of her adrenal glands and that it was necessary to work out some other treatment. It was found that large doses of Atchargel injected twice a week was the only way they could keep the patient comfortable and partially ambulatory.)

In the above cited case the committee did make recommendation to the physician and, according to Mark D. Holcomb, M.D., Chairman of the Insurance Review Committee, the same recommendation should be made to all OSMA member-physicians: In situations where a physician finds that a long term treatment by injection is necessary, some arrangement should be made for someone in the patient's family, or perhaps a visiting nurse association, to give the injections. This will eliminate the possibility of any criticism of the physician and will actually be good public relations for the profession.

During its August 24th meeting, the committee heard a total of 18 cases. This represented a backlog of several months. In eight of the cases the committee found that the physician's charges were justified. In five cases it found that the charges were not justified and should not be paid. In five other cases it found that part of the charges were justified and should be paid. □

## Vote Close on AMA Dues Referendum

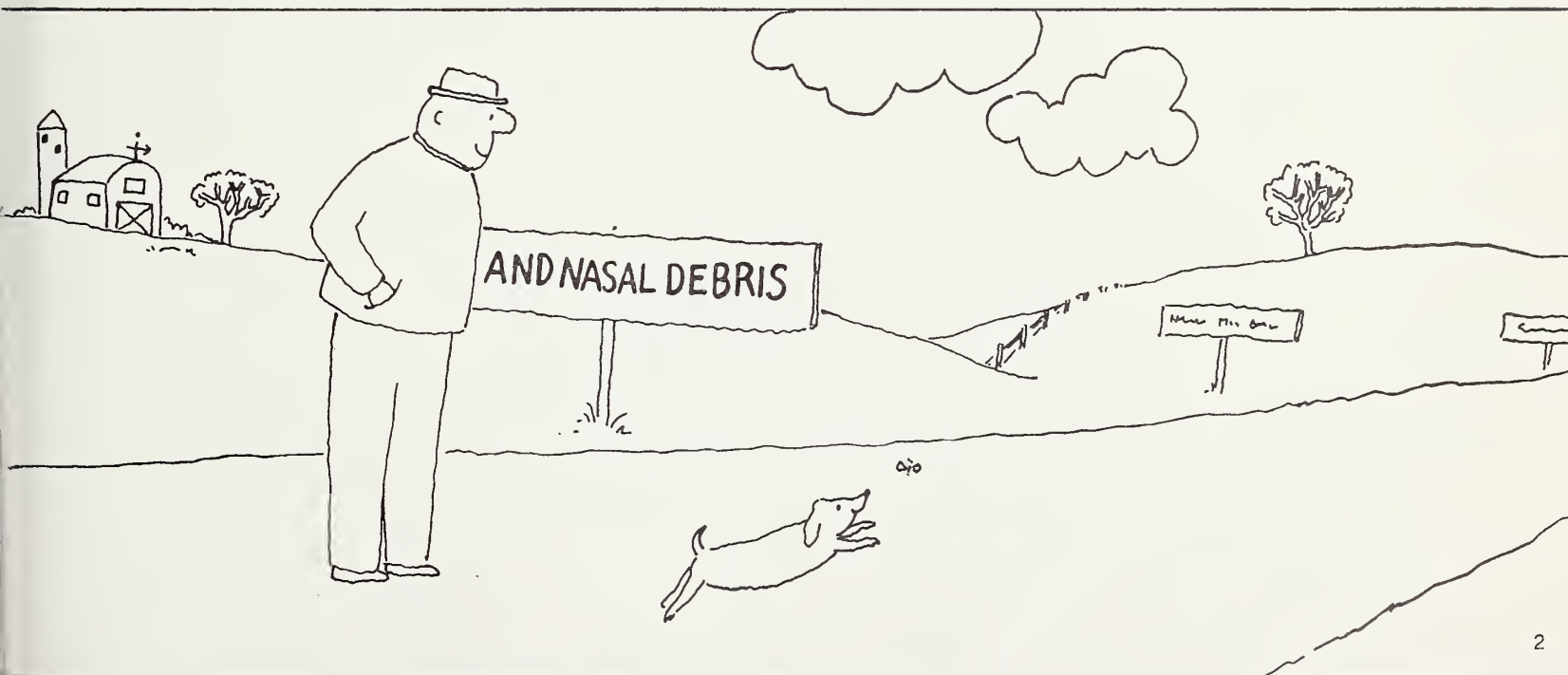
OSMA members have voted to retain mandatory membership in the AMA as a requirement for membership in the state association. In an unofficial tally the vote was a close 652 in favor of mandatory membership to 560.

Hillard E. Denyer, M.D., OSMA President, has asked the association's Executive Committee to verify the vote count for later presentation to the OSMA House of Delegates.

The referendum was conducted by the Executive Committee at the direction of the OSMA House of Delegates. During its 1969 annual meeting in Tulsa, the House adopted a resolution from the Pontotoc County Medical Society which called for a referendum on the OSMA policy to require membership in the American Medical Association.

As adopted, the resolution stipulated that "pro" and "con" statements be distributed along with a ballot reply card in order that an informed vote could be cast by association members.

The resolution further stipulated that results of the survey were to be tabulated by the Executive Committee and to be published in the association's newsletter and journal. The referendum results would be made available for formal consideration by the OSMA House of Delegates.





The "pro" statement that accompanied the mail ballot was prepared by the OSMA delegates to the AMA: Malcolm Phelps, El Reno; Harlan Thomas, Tulsa; and Francis A. Davis, Shawnee. A statement favoring optional or voluntary AMA membership was prepared by the Pontotoc Medical Society.

The two statements, along with a mail ballot, were distributed to all members of the OSMA on July 28th and they were asked to return their ballot no later than August 25th. A total of 1,212 votes were cast.

As soon as the vote is officially tabulated by the Executive Committee, it will be made available to the House of Delegates.

Although the vote is not binding and is merely informational to the House of Delegates, the House could choose to remove AMA membership as a requirement for membership in the state association. This would require an amendment to the association's bylaws and could only be done during an annual meeting of the House of Delegates. Any change in membership requirements, therefore, could not take effect until January 1st, 1971. □

## OSMA President Hits Fee Freeze

New regulations calling for a physician "fee freeze" under the Medi-

caid program were recently issued by the Department of Health, Education and Welfare. Hillard E. Denyer, M.D., President of the OSMA, said, "This puts physicians in the unique position of being the only people in the United States under wage control."

The comments by the association president were made in a news release issued to all major media in the state. Denyer pointed out, "When HEW froze physicians' fees, it did not freeze inflation. As the cost of practicing medicine goes up, the doctor cannot adjust his charges like other purveyors of goods and services do."

Costs of operating a medical practice are rising at a rate of eight percent a year, according to the president, which exceeds the increase in physicians' fees. New equipment, rents, supplies and salaries for nurses and skilled technicians are other major factors. "Also," Denyer said, "additional help has been necessary to keep up with government paperwork."

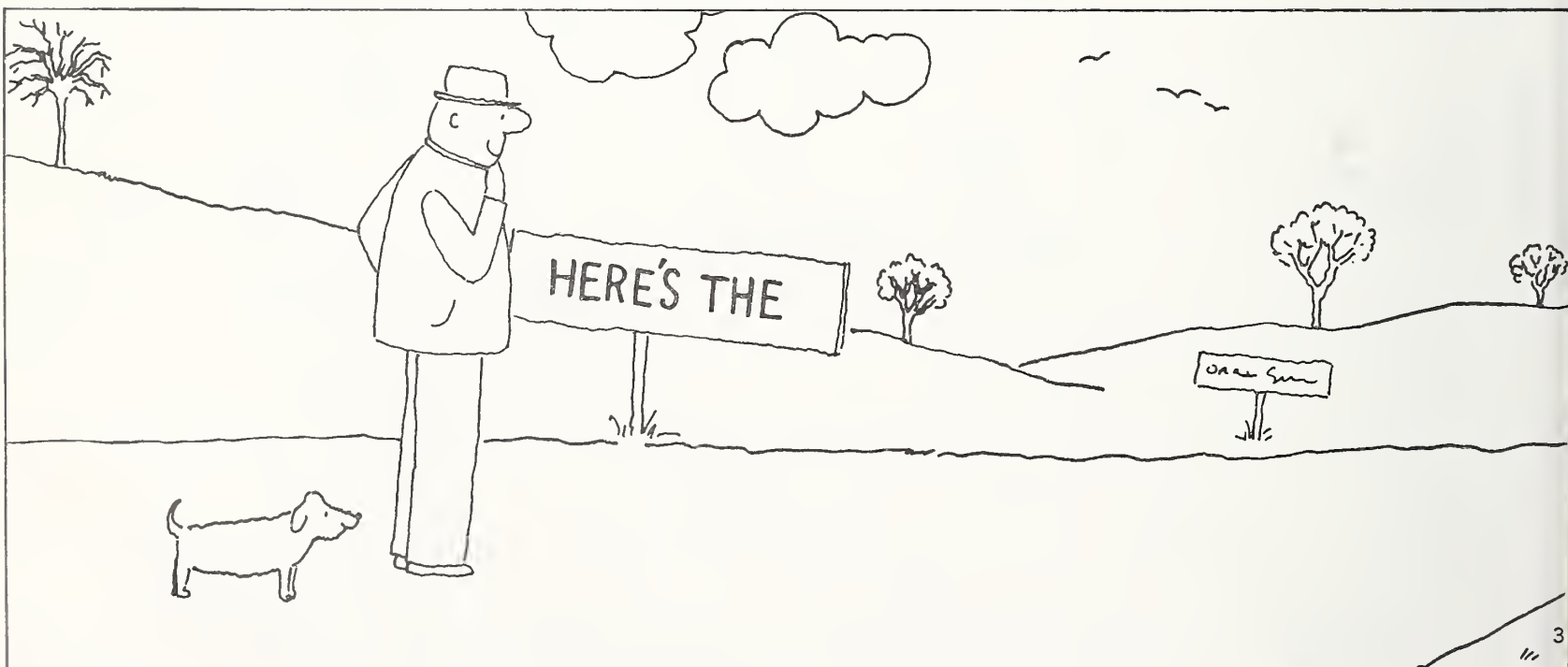
"The arbitrary action to freeze fees is especially harmful to those physicians who have a high percentage of their practices made up of welfare recipients," Denyer said, "and it will necessarily blunt our efforts to get doctors to locate in the low income areas which have large concentrations of Medicaid patients."

In response to a question about the current U. S. Senate Finance Committee investigation of physicians' fees under Medicare and Medicaid, Denyer replied, "we are getting 11 percent of the money and 100 percent of the heat. For our 11 percent the medical profession seems to be getting more than its share of the government's attention. The HEW Department recently announced that it anticipated an average increase in the overall costs of Medicare and Medicaid to be ten to 12 percent a year. In that case, if you wiped out all physicians' payments, in one year you would be right back where you are today."

While pointing out that the OSMA and the American Medical Association will continue to seek ways to lower the costs of medical care, Denyer said, "We cannot be held specifically responsible for the general inflation which is present throughout the entire economy." □

## 1970 Census Count Coming

With the decennial census of population and housing to begin next April 1st, the Census Bureau is seeking space for 400 district offices throughout the nation. The bureau says the 400 offices, with district managers, will divide the nation into units of 500,000 persons each. □





**Senator Harris  
Endorses Chiropractors**

Oklahoma's senior senator, Fred R. Harris, has gone on record in favor of chiropractors being paid under the Medicaid program. On May 8th the Congressional Record disclosed that Harris had requested that his name be listed as a co-sponsor of two senate bills designed to amend Title 18 of the Social Security Act so as to include chiropractors' services among the benefits provided.

On June 3rd Rex E. Kenyon, M.D., Chairman of the OSMA Council on Public Policy, wrote Senator Harris and asked him to reconsider his decision. He stated, "Perhaps . . . you will agree with us that Medicare beneficiaries should be protected from chiropractic treatment which often times delays the scientific management of a health condition to the point where the disease is irreversible."

Senator Harris has not answered this letter.

The letter included several enclosures to support the OSMA's contention that chiropractors practice in an irregular doctrine. The enclosures included a 1966 report from the Department of Investigation of the AMA, an abstract of the HEW report to Congress in which Secretary Cohen recommended against the inclusion of chiropractors under Med-

icare, special report from the National Council for Senior Citizens in which chiropractic services and doctrines were opposed, an abstract from an opinion rendered by the Oklahoma Supreme Court in 1967 in which it held that chiropractors are not "physicians and surgeons," and an article from *The New Physician* which abstracts the essentials of Canadian government report concerning the cult of chiropractic. □

**HEW Lists Five-Year Health Plan**

Department of Health, Education and Welfare officials have released a five-year plan on health care. Entitled the Fiscal Year 71-75 Draft Health Program Memorandum, the plan won tentative approval from HEW Secretary Finch.

While circulating the plan through the hierarchy of HEW, Secretary Finch attached a cover memorandum to it. In it he said, "I have identified the following areas of emphasis that I would like you to use as a guide in preparing your . . . long-range plan and the . . . 1971 budget proposals.

—Improving the health of the nation's children, particularly during the first five years of life;

—Extending the availability of family planning information and services;

—Increasing the supply of physi-

cians and other skilled health manpower;

—Expanding efforts to improve the organization and delivery of health services, especially for the poor;

—Accelerating movement to prevent and control narcotic addiction, drug abuse and alcoholism;

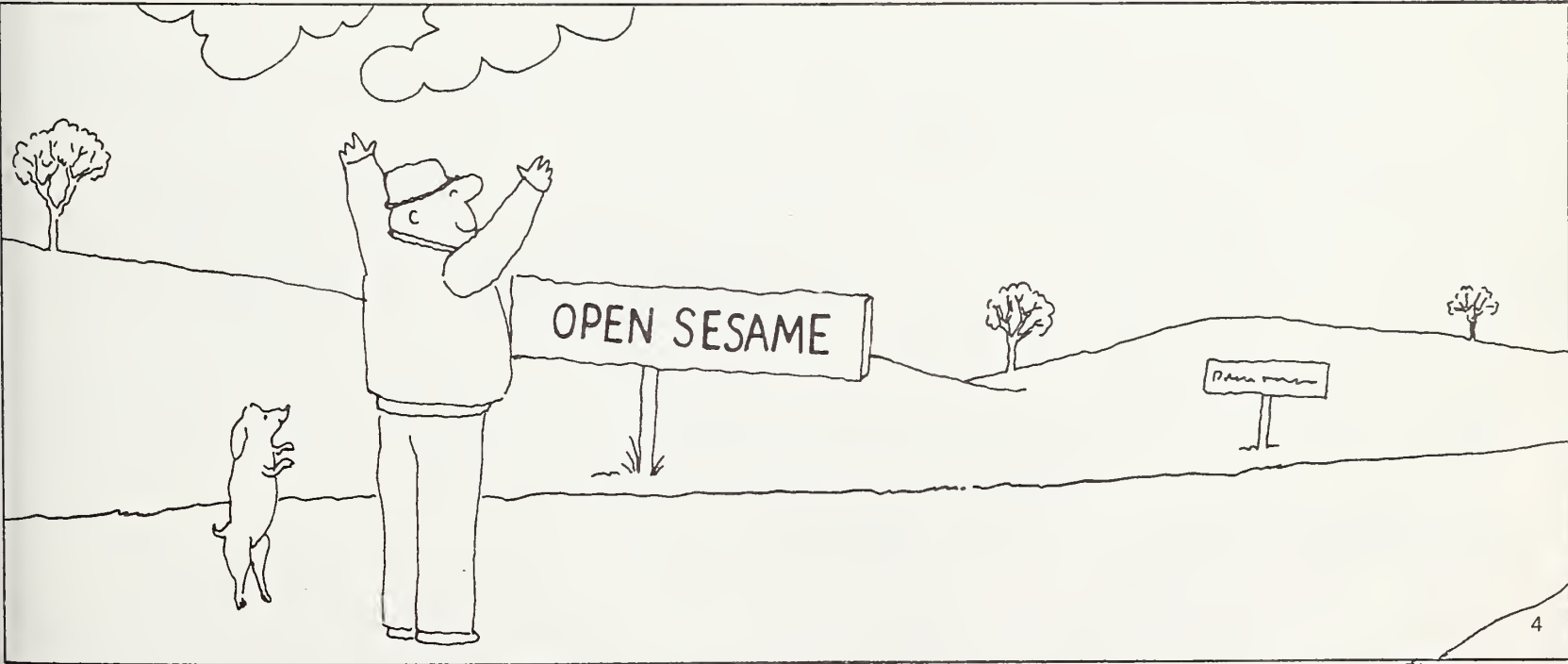
—Meeting to a greater extent the health needs of the migratory worker; and

—Strengthening protection of the consumer and promoting a healthy environment."

The five-year plan was prepared by the office of Assistant Secretary Louis Butler. Out of the welter of data in the revised five-year plan, one inescapable fact is clear: health ranks third in the scale of planning priorities for funds and programs, below education and welfare. This does not preclude the possibility that there will be dramatic and, perhaps, innovative changes in the seven priority areas outlined by Secretary Finch. □

**Ranks of Women Workers Increase**

An increase of 900,000 women workers in the U. S. was recorded by the Labor Department in the 12-month period ending April, 1968. In that month, there was a total of 28.7 million women, 16 years of age or older, holding jobs. □





## Clinical Society To Meet at Skirvin

The Skirvin Hotel will be the site of the 39th Annual Fall Conference of the Oklahoma City Clinical Society this year. The opening session will be at 9:00 a.m., on October 27th and the meeting will continue through Wednesday, October 29th.

Thirteen out-of-state guest speakers will be presented at the general sessions on Monday, Tuesday and Wednesday. In addition, members of the faculty of the University of Oklahoma School of Medicine will present a special program on Monday morning entitled "What's New and What's Usable of What's New."

Features of the three-day conference will include an Oyster and "Keg" Party, sponsored by the Clinical Society and Marion Laboratories and specialty society dinners by groups in Medicine, Neurosurgery, Obstetrics - Gynecology, Pathology, Pediatrics, Psychiatry, Surgery and Urology on Monday evening; the annual banquet highlighted by special musical entertainment on Tuesday evening in the Persian Room of the Skirvin Tower; and special entertainment for the wives of attending physicians, which in-

cludes a luncheon and style show on Tuesday.

### Guest Lecturers

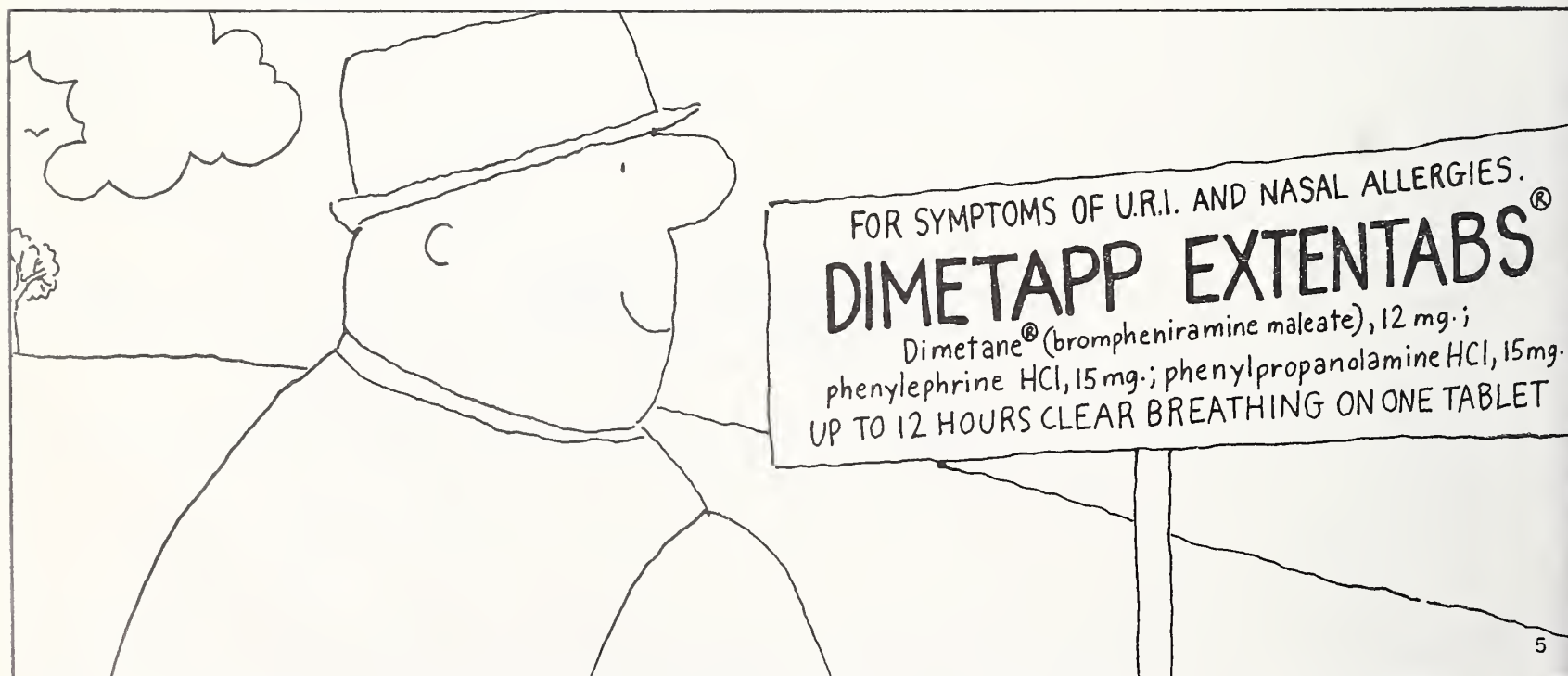
The 13 distinguished speakers who have accepted invitations to appear during the meeting are: Thomas P. Anderson, M.D., Staff Physiatriist, Kenny Rehabilitation Institute, Minneapolis, Minnesota; Brock E. Brush, M.D., Surgeon-in-Charge, Henry Ford Hospital, Detroit, Michigan; Allen J. Enelow, M.D., Professor and Chairman, Department of Psychiatry, Michigan State University, East Lansing, Michigan; Robert B. Greenblatt, M.D., Professor and Chairman, Department of Endocrinology, Medical College of Georgia, Augusta, Georgia; Donald B. Lauria, M.D., Chairman, Department of Public Health and Preventive Medicine, New Jersey College of Medicine and Dentistry, New York City; Tom Shires, M.D., Professor and Chairman, Department of Surgery, The University of Texas Southwestern Medical School, Dallas, Texas; Charles G. Drake, M.D., Professor and Chairman, Department of Clinical Neurological Sciences, University of

Western Ontario, London, Ontario, Canada;

William J. Grace, M.D., Director of Medicine, New York Medical College-Bellevue Medical Center, New York City; Gunter R. Haase, M.D., Professor and Chairman, Department of Neurology, Temple University School of Medicine, Philadelphia, Pennsylvania; Kenneth J. MacKinnon, M.D., Professor of Surgery (Urology), McGill University, Montreal, Canada; Arnold J. Rudolph, M.D., Associate Professor of Pediatrics, Baylor College of Medicine, Houston, Texas; J. Cuthbert Owens, M.D., Professor, Department of Surgery, University of Colorado Medical Center, Denver, Colorado; and, Harold H. Varon, M.D., Director of Endocrine Research and Associate Professor, School of Graduate Studies, Baylor University Lecturer, Southwestern Medical School, Dallas, Texas.

The society has been authorized that, upon recommendation of the Oklahoma Academy of General Practice, the 1969 Fall Clinical Conference is acceptable for 30 prescribed hours of credit by the American Academy of General Practice.

Advanced registration fee of \$25.00 may be sent to the Executive Office of the Oklahoma City Clinical Society, 2809 Northwest Expressway, Oklahoma City, Oklahoma 73112. □



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# OSMA Trustees Consider Medicaid Freeze

New HEW Medicaid regulations instructing local Medicaid carriers to freeze all physicians' fees effective July 1st came under discussion at the August meeting of the OSMA Board of Trustees.

Robert Sukman, M.D., Chairman of the OSMA Governmental Relations Committee reviewed the background of the Medicaid program for the Trustees and pointed out that the OSMA House of Delegates has a policy that physicians will accept only usual, customary and reasonable fees. If the Board of Trustees viewed the fee freeze as a violation of the UCR concept, he said, then it would be necessary to call a meeting of the OSMA House of Delegates.

Members of the board expressed the view that a moderate approach to the regulation should be taken until association officers could have an opportunity to discuss them in depth with L. E. Rader, Director of the Public Welfare Department. It was also noted that Oklahoma, despite problems, presently has the most reasonable Medicaid payment mechanism in the country, and that the fee freeze was not the work of the Department of Public Welfare.

In order to avert the fee freeze, and not violate the House of Delegates policy regarding UCR, it was recommended that the Department

of Public Welfare remove the jurat from the Medicaid claim form, thus permitting direct billing of the patient for small amounts.

The board also discussed the new medical insurance claims review system. One of the insurance carriers had requested that the review committee hear cases involving non-member physician claims. The board voted to allow the committee to hear such claims if the insurance carrier would obtain written permission from the physician whose claims were being questioned.

## Other Actions

The 1971 annual meeting of the association was discussed by the board. It is customary for the annual meeting of the association to fall sometime during the middle of the month of May. The 1971 dates would conflict with the International Oil Exposition. The board, therefore, accepted a recommendation of the Annual Meeting Committee that the Tulsa meeting be held on April 29th through May 1st, 1971.

The Committee on Planning reported to the Board that the headquarters building fund obtained from voluntary contributions had reached nearly \$19,000. Over \$15,000 of this amount had been pledged to construction costs leaving a little more than \$3,000 for furnishings and equipment in the new portions of the building. To augment these funds the committee reported that \$100

memberships would be sold in a "Century Club," and that the names of contributors would appear on a brass plaque in the new building.

Scott Hendren, M.D., vice president of the Comprehensive Health Planning Advisory Council, told the Board of Trustees that a chiropractor has been named by the Governor to serve on the council. Although the law requires that the majority serving on the council shall be "consumers," he said there are eight physicians on the council at this time. Hendren stated that at a recent meeting of the council he objected to the chiropractor serving as a "physician."

In other actions the Board of Trustees accepted the resignation of Samuel R. Turner, M.D., Tulsa, and named his alternate, Paul A. Bischoff, M.D., as trustee. Also, in compliance with the bylaws, the board appointed Myra A. Peters, M.D., Tulsa, to fill the unexpired alternate trustee term of Doctor Bischoff.

Three physicians were nominated by the board for one appointment to the State Board of Medical Examiners. The term of Edgar W. Young, Jr., M.D., El Reno, expired on July 1st. Doctor Young was nominated for reappointment to the board. Also nominated were Doctors Richard W. Loy, Pawhuska, and Harold Belknap, Jr., Norman. □

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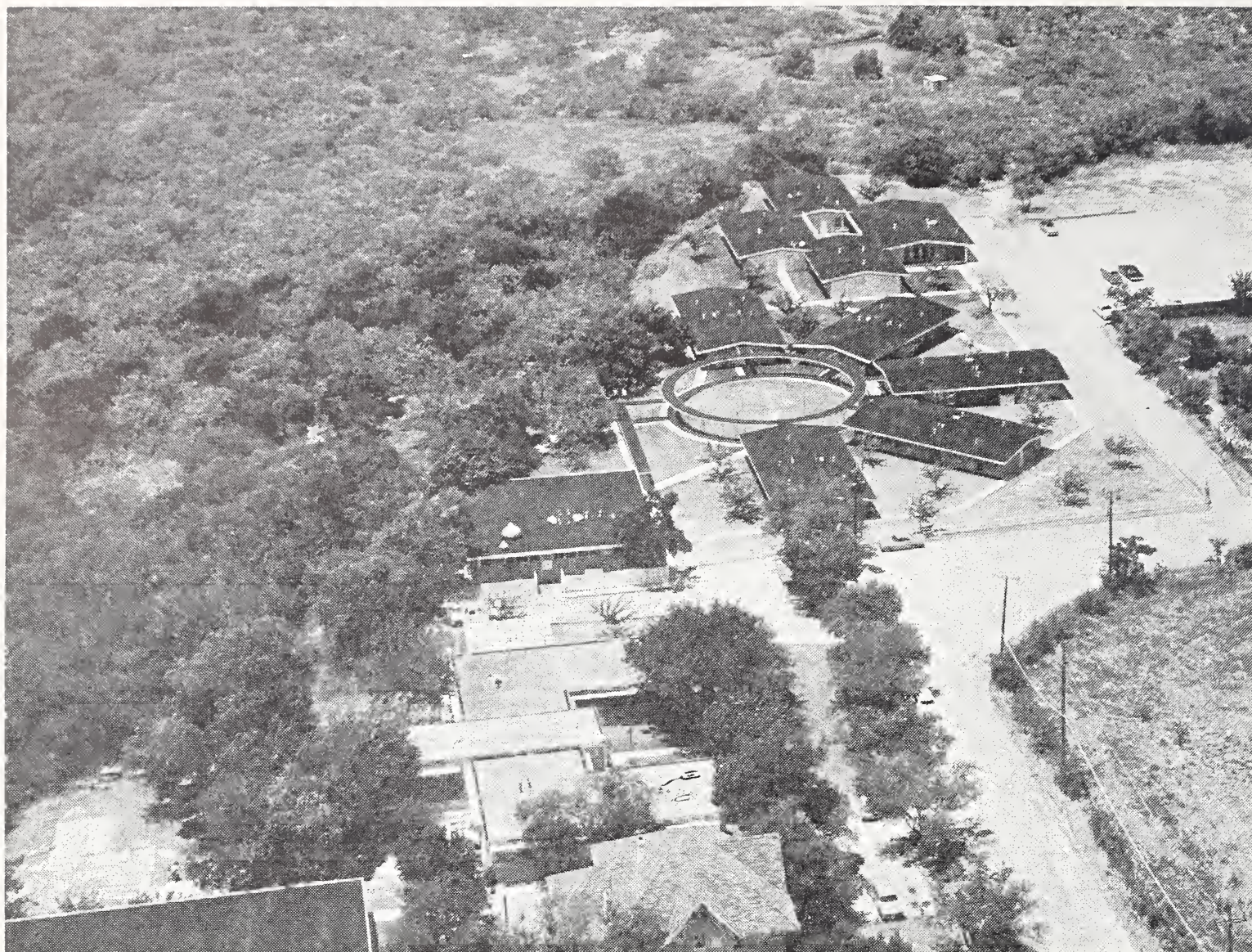
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## Occupational Medicine Committee Named In Lawsuit

A lawsuit has been filed in Oklahoma's Supreme Court against Governor Bartlett, OSMA's Occupational Medicine Committee and others.

Tommie Kyle Phelps, a Muskogee iron worker, through his petition to the state court, has challenged Governor Bartlett's authority to establish a medical panel and the Industrial Court's authority to order him to submit to an examination by a physician named on the panel.

At the request of the Governor's office, OSMA's Occupational Medicine Committee organized a review panel of more than 50 volunteer physicians who were willing to examine Workmen's Compensation cases wherein there was a wide variance of medical opinion. The panel, almost a year in the making and first requested by a legislative study committee, is thought to be the only one of its kind in the United States. Organized strictly for the use of the court, members of the panel were selected on the basis of their willingness to serve, medical specialty and geographic location.

The committee's purpose in organizing the panel was to provide objective medical testimony for the Industrial Court in cases where there was a wide divergence of medical opinion. Dr. James P. Bell, chairman of the committee, explained to members of the legislature that "... so long as physicians are asked to rate disability rather than impairment, there will always be differences of medical opinion." The Occupational Medicine Committee feels that by offering the services of the panel, the court will be in better position to make equitable compensation awards.

The Industrial Court, by statute, has always had the right to order an injured worker to be examined by a physician of the judge's choice. A common complaint of the court, prior to the creation of the panel, was that specialists were often too busy to examine these patients expeditiously. Under the panel sys-

tem, physicians are asked to report to the court within ten days.

Support for the medical panel has been widespread. Members of the legislature, industry and insurance profession have professed confidence in the panel idea.

Primary opposition has come from labor and the Oklahoma Trial Lawyers Association. □

## Truth in Lending—A Potential Thorn?

Oklahoma physicians may be covered under Regulation Z and the new Oklahoma Consumer Credit Code.

Recent opinions from AMA indicate that physicians who regularly extend credit to their patients must comply with the disclosure provisions of the new federal law, regardless of whether or not interest is charged. The "extension of credit" is construed to mean the privilege of retiring a debt in more than four installments.

What constitutes the "extension of credit"? This apparently is the main question to be answered. If a physician bills a patient for \$100 and receives a payment of \$20, has he,

upon acceptance of the partial payment, agreed to credit terms? OSMA's legal counsel and staff are working with the director of the Consumer Credit Commission to determine to what extent physicians are covered, and if so, what will be necessary to conform to the regulations.

The primary purpose of both Regulation Z and the Oklahoma Code is disclosure to the consumer of interest and carrying charges. If a physician charges interest, or if he permits a time price differential, (\$200 if paid in installments or \$180 if paid in cash) then he clearly comes under the provisions of the act and will have to conform to the regulations and register with the Oklahoma Consumer Credit Commission.

The Judicial Council of AMA has held: "It is not in the best interest of the public or profession to charge interest on an unpaid bill or note or to charge a penalty on fees for professional services not paid within a prescribed period of time . . ." OSMA's governing body has no position on interest charges but will discuss the matter at a future Board of Trustees meeting. □

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**of the**

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**MAY 14th-17th, 1970**

**Skirvin Hotel Convention Center**

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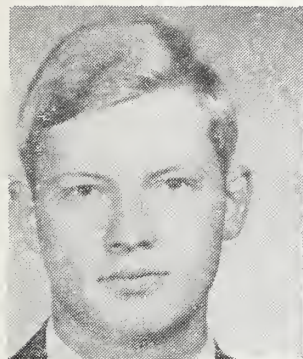
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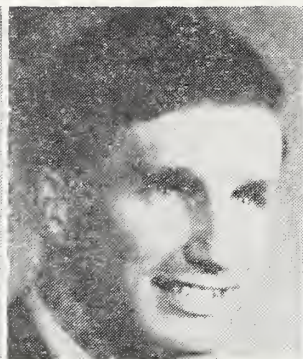
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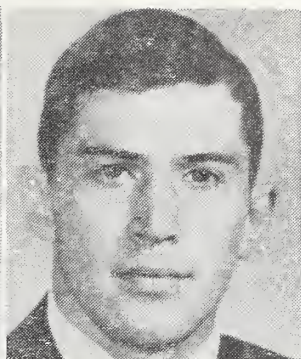




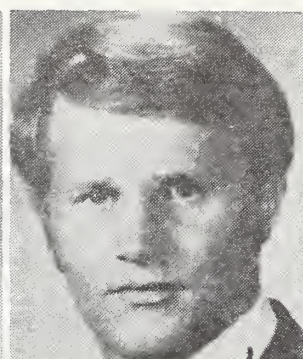
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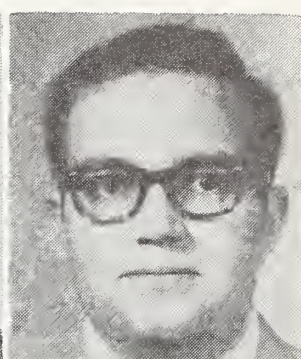
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## Medical Association Awards Five Scholarships

Five future physicians have been named by the Oklahoma State Medical Association to receive \$500 scholarships as freshmen medical students in the University of Oklahoma School of Medicine. The five: Vernice Eugene Bates, Wilburton; Stephen T. Autry, Stillwater; Zeb Linston Brister, Tulsa; Patrick David Barnes, Muskogee; and Travis Edward Solomon, Yukon, were chosen by the medical association's Financial Aid to Education Committee.

Selection of the five was based on academic excellence in their pre-medical school work and in their medical school entrance examinations.

The financial assistance program is an eight-year old project of the association and is specifically aimed at attracting Oklahoma's top students to the OU Medical School. Since its inception in 1961, 50 scholarships have been given out for a total of \$25,000.

In addition, the association has made long term loans to 99 deserving medical students for a total of \$45,000.

The funds for the scholarships and loans are contributed by the 2200 member-physicians of the state association. A portion of their annual dues goes into a special scholarship and loan fund for this purpose.

The five new scholarships were awarded during a special assembly in the medical school on Thursday, September 4th. According to Hillard E. Denyer, M.D., Bartlesville, OSMA President, "Physicians are vitally interested in maintaining the necessary quantity and quality of professional medical care for the people

of Oklahoma. As individuals and as an organization we work toward this objective in many ways . . . the financial aid to education program, we feel, will complement our other activities and we hope it will be of great benefit to the state of Oklahoma."

The five new students will bring to the OU Medical School a diversity of backgrounds.

Vernice Eugene Bates is the son of Mr. and Mrs. John Alexander Bates of Wilburton. He attended Wilburton High School where he was a member of the state honor society for four years and salutatorian for his senior class. He took his pre-medical requirements at Eastern Oklahoma State, Wilburton, and Oklahoma University, Norman. While at Eastern State he was named the outstanding freshman student.

Stephen T. Autry is the son of Mr. and Mrs. Ottwa T. Autry, 1310 Ramona, Enid. He attended Enid High School where he was a member of the National and Oklahoma Honor Societies and lettered in football and swimming. He took his pre-medical requirements at Oklahoma State University, Stillwater, where he was a member of Blue Key, President of the Inter-Collegiate Knights, was on the President's and Dean's Honor Rolls, and won the scholarship award for varsity swimming.

Zeb Linston Brister is a graduate of Tulsa Central High School and attended the University of Tulsa. In high school he was a member of the National Honor Society, and lettered in football. At Tulsa University he was a member of Phi Eta Sigma, freshman honorary society, was on the President's Honor Roll, and was

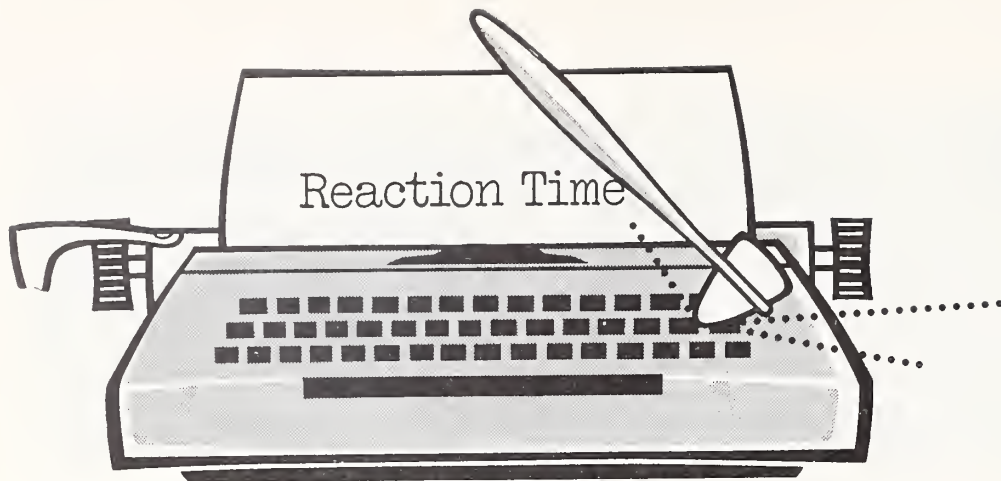
president of Omicron Delta Kappa. He is the son of Doctor and Mrs. Zeb Linston Brister, T.H.D., 425 South 106 East Avenue, Tulsa.

Patrick David Barnes is the son of Doctor and Mrs. Harry Edward Barnes, M.D., 1016 Honor Heights, Muskogee. He attended Ewing Hallsell High School, Vinita, and the University of Oklahoma. While in high school, he was named valedictorian for his class and attended Boys State. At OU he was named one history. At OU he was named one of the top ten freshmen, won the President's leadership award, was on the President's Honor Roll, and was a member of Omicron Delta Kappa leadership fraternity.

Travis Edward Solomon is the son of Mr. and Mrs. Luther Edward Solomon, 1816 N.W. 35th, Oklahoma City. He attended Harding High School in Oklahoma City where he was a member of the National Honor Society and a National Merit Semi-finalist, and was recipient of the Gaylord Philanthropies Award. He took his pre-medical work at the University of Pennsylvania, Oklahoma State University, and Central State College. At the University of Pennsylvania he was named General Honors Scholar and winner of the Ben Franklin National Scholarship. While at OSU he was on the President's Scholarship and Dean's Honor Roll and was on the Dean's and President's Honor Rolls at Central State College.

The scholarships for the five young people will be given to them in two increments of \$250 each payable at the start of the first and second semesters in medical school. □





June 23, 1969

Mr. W. R. Bethel, President  
Oklahoma Blue Shield Plans  
1215 South Boulder  
Tulsa, Oklahoma

Dear Mr. Bethel:

I am distressed at the recent change in composition of the Board of Trustees for the Oklahoma Blue Shield Plans. The Board was composed of nine physician members and nine non-physician members for a number of years. The Board now consists of nine physician members and 15 non-physician members. I am grieved that our physician members on the Board would acquiesce to such an agreement. I am interested in hearing from you as to why the administration of the Blue Shield Plans would think such an arrangement necessary.

It has been brought to my attention that such a plan had been in the making for several months; your director of professional relations did not inform the prepaid medical committee of the Oklahoma State Medical Association. Why? Are we to conclude that there was a conspiracy of secrecy about a matter of so much concern to organized medicine? I am amazed that this was not brought up for discussion at the recent State Medical Association's Delegates meeting.

One of the trustee members of your organization has informed me that you are already administering a program for dental care in Oklahoma. Is this information factual, and how broad is the scope? When do you plan on instigating such a program in Oklahoma? The Blue Shield Plan is largely a hospital oriented plan. The Dental program will obviously be an office oriented plan. What advantage will result by administering the programs together?

It is requested that you furnish me a list of the physician members who served on the Board at the time of the change in the composition of the Board and a list of the physicians who presently serve on your Board.

Sincerely yours,

EDWARD K. NORFLEET, M.D.  
3102 S. Harvard, Tulsa, Oklahoma 74135

June 27, 1969

Edward K. Norfleet, M.D.  
Ranch Acres Medical Center  
3102 South Harvard Avenue  
Tulsa, Oklahoma 74135

Dear Doctor Norfleet:

Your letter of June 23, has been read with interest. The subject matter involves corporate actions taken by all the Members of the Board of Trustees, both public and professional, of the Blue Shield Plan. It is the policy of this organization to discuss matters affecting the corporate operations with regulatory and authoritative agencies involved. The development of various programs are currently underway. As these programs evolve, announcements will be made.

The action taken by the Board of Trustees of Oklahoma Physicians Service appears to represent a mutually satisfactory solution to a very complicated problem. One that has been under considerable discussion for several years. It was the feeling, we believe, that most of the members of the Board of Trustees felt that the members of the dental profession were faced with as serious a threat as that facing the medical profession . . . that the dental profession might well be a strengthening ally in developing a stronger bulwark against government intervention.

It was not, therefore, the thought

of anyone that the inclusion of a limited number of dental representatives for the purpose of developing a dental program would weaken the medical representation; but, rather, it would be a strengthening approach.

The dental profession was so greatly concerned about the threat of government intervention into the provision of dental services that it seriously considered developing a third prepayment organization. That action would have created division and confusion; it would have been an irritant in the minds of the public.

Perhaps, we have been of little help; but, we are unable to add a great deal more by way of explanation of circumstances in which there has been honest, sincere, and dedicated effort on the part of honorable representatives in an attempt to arrive at a mutually satisfactory solution to a difficult problem.

May we suggest that any further information relative to actions taken be acquired from your fellow-physicians who participate in our organization.

Sincerely,

W. R. BETHEL

President, Oklahoma Blue Cross  
& Blue Shield

P.O. Box 1738

Tulsa, Oklahoma 74104

□

## New Book Attacks Chiropractic

A new and potent attack has been made on the practice of chiropractic in the U.S. Ralph Lee Smith's new book, "At Your Own Risk: The Case Against Chiropractic." It is a well documented explanation of the chiropractic cult.

Smith, author of The Health Hucksters, is an experienced medical journalist and has been delving into chiropractic for many years. In preparing "At Your Own Risk," he traveled throughout the country and was treated as a patient at famous chiropractic clinics.

The book is published by the Pocket Books Company of New York and sells for 95c. A hard bound edition is being published by Trident Press of New York.

□



## BOOK REVIEWS

**ZINSSER MICROBIOLOGY.** By David T. Smith, et al; 14th Edition. New York: Appleton-Century-Croft, 1968. 1,281 pp. \$22.50.

This is the fourteenth edition of this standard textbook of microbiology edited by David T. Smith and others. It appears three years since the thirteenth edition and some 59 years since the first edition. Several changes are evident. New chapters have been added dealing with antigens, complement, heritable immunogenic defects, bacteriophage, and dental caries. Several chapters have been revised and expanded. These include those on tissue transplantation, staphylococci and anonymous mycobacteria. The list of references has been brought up-to-date and a significant number of new illustrations have been added.

This excellent textbook will continue to serve as a well deserved standard reference for students and others.—*Harris R. Riley, Jr., M.D.*

**AN ABC OF MODERN IMMUNOLOGY.** By E. J. Holborow, M.D. 89 pp., illustrated. Boston: Little, Brown and Company, 1968. \$3.95.

The striking upsurge of interest in immunologic activity witnessed in the 1950's and 1960's is being followed by exciting clinical prospects. The signs are evident in today's attempts in treating immunological deficiency syndromes, in immunosuppression and in the use of antilymphocyte serum. What once may have seemed abstract and more concerned with the laboratory than the ward has become part of everyday clinical practice. This succinctly written small book well serves the purpose the author intended, namely "of providing a primer of modern immunology to assist those who are familiar with the general background of immunologic science and seeks a link with present developments in this subject." For those not experienced in immunology it presents a difficult text since through its brevity the material included is so concentrated that comprehension of almost every sentence is necessary

## DEATHS

**HENRY S. BROWNE, M.D.**  
1890-1969

A prominent Tulsa urologist, Henry S. Browne, M.D., died August 20th, 1969. A native of St. Gabriel, Louisiana, Doctor Browne graduated from the Tulane University School of Medicine in 1914. His practice was established in Tulsa in 1916.

Author of many medical publications, he was active in his professional affiliations having served as president of the Tulsa County Medical Society and the South Central Section of the American Urological Association. He was a member of the American College of Surgeons and the Oklahoma Urological Society.

Doctor Browne was a Life Member of the Oklahoma State Medical Association and was named Doctor of the Year in 1963 by the Auxiliary to the Tulsa County Medical Society.

**WILLIAM O. SMITH, M.D.**  
1896-1969

William O. Smith, M.D., retired Tulsa ophthalmologist, died in Tulsa July 29th, 1969. The 73-year-old physician graduated from the University of Oklahoma School of Medicine in 1925 and established his practice in Tulsa in 1926.

In recognition of his years of dedicated service, the Oklahoma State Medical Association had made Doctor Smith a Life Member. He was a member of the National Otolaryngology Society and the Kappa Alpha. □

for appreciation. For those with a basic knowledge of classical immunology, this monograph affords an excellent approach to concepts fundamental to modern immunology. Although the references are pertinent and well chosen, the book could have been improved if a Table of Contents and Index had been included.—*Harris D. Riley, Jr., M.D.*

**QUESTIONS AND ANSWERS ON CONTACT LENS PRACTICE.** Jack Hartstein. St. Louis: The C. V. Mosby Company, 1968. 199 pp. \$10.75.

In the preface the author states this book is essentially a compilation of practical information in contact lense fitting and is an outgrowth of material gathered in preparations for lectures and seminars given at Washington University School of Medicine in St. Louis and for annual courses to professional groups. This manual provides a detailed step-by-step procedure in the work-up and care of the patient. Its question and answer form provides practical information in a concise, readily available form. The author covers a variety of topics including nomenclature, corneal physiology, optical principles, and

techniques of dispensing lens to patients. He considers the biomicroscope essential for evaluating cornea-lense relationships.

This book should be of value to physicians involved in this type of ophthalmologic work. — *Harris D. Riley, Jr., M.D.*

**SURGICAL PATHOLOGY.** Lauren V. Ackerman. 4th Edition. St. Louis: The C. V. Mosby Company, 1968. 1,140 pp. \$27.50.

Ackerman's Surgical Pathology is a standard reference. This, the fourth edition, contains certain major changes from that of the third edition which appeared in 1964. The text has been reset with a two column format for the index, which has been enlarged and updated. New collaborators have been added for the chapters on the female reproductive system and the eye. The section on tumors has been completely rewritten and certain additions and deletions have been made in the text. New illustrations, particularly electron photomicrographs, have been added. The references have also been brought up-to-date.—*Harris D. Riley, Jr., M.D.* □



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Dear Auxiliary Members:

Greetings and best wishes for a tremendous 1969-1970 auxiliary year with happy memories of last year's bountiful harvest,



Mrs. Virgil Ray  
Forester

under the capable guidance of our fine leader, Mrs. Alfred T. Baker, immediate past - president, to whom we express our sincere thanks and appreciation.

A hearty welcome we warmly extend to Mrs. J. Hartwell Dunn, our newly installed president, for the coming year. Her well-organized beginning as "Master of the Auxiliary Gavel" has already made our prediction "Year Success" a reality under her splendid direction.

Our blessings on two devoted presidents with a common goal—a love for medical auxiliary and, also the many all important county presidents, who so consistently manifest evidence of definite loyalty and zeal in furthering the policies and programs of the state auxiliary.

It was a happy privilege to be seated with the body of auxiliary delegates, as director, at the 118th Annual Meeting of the American Medical Association in the Americana Hotel, New York, New York, Sunday, July 13th, 1969.

During the opening ceremonies, while viewing the "Pageant of the Flags" accompanied by the inspiring, patriotic music of the 60-man team of the colorfully uniformed Marine and Drum and Bugle Corps, suddenly there was havoc, as if a well timed bomb had exploded in our very midst. Youthful protestants hissed and scorned the American flag as they stormed down the aisle of the meeting room to the podium, endeavoring to gain control of the ugly situation, screaming, demanding and making accusations to the presiding physicians.

The delegation looked on with amazement, watching the riot scene with complete dismay that an otherwise perfect afternoon's activities had thus been tarnished and completely destroyed.

Is there hope?

Certainly by all the stars above—the 50 in the flag's field of blue—THERE IS HOPE.

Reflecting the past brought a first blessing—the splendid manner in which the AMA delegates handled an otherwise tragic situation.

To say that we are proud of our doctor husbands is an understatement. They truly illuminated all fifty stars in Old Glory by their calm, magnificent control which was awesome and most disappointing to the intruders seeking bedlam.

In reflecting the situation, one is reminded of Astronaut Neil Armstrong, who on entering Apollo 11 Module, asked that all America pray. As a result, MOON WALKING became a reality.

From the auxiliary standpoint, there is gleaming hope in a devotional recently presented at a joint board meeting, by Mrs. M. Thomas Buxton, president of Oklahoma County Auxiliary. Her summary words were: "So I say to you as auxiliary members and friends, 'ye are the salt of the earth, and if the salt has lost is savour, wherewith shall it be salted'?"

Therefore, let us be positive about the good and great accomplishments in medicine. Let us stand up and be counted for the RIGHT in the noble art. Let us be proud of our MEMBERSHIP in the auxiliary to our husbands' profession. Let us strive for greater volume in membership for together we can move the highest mountains—and most certainly TOGETHER WE SHALL ALWAYS STAND.

Always best in auxiliary,  
Mrs. Virgil Ray Forester (Zellie)  
2336 Belleview Drive  
Oklahoma City, Oklahoma 73112



**Projections to the year 1975 indicate** that health care will probably be the largest, single industry in the country. The President's National Advisory Commission on health manpower has estimated health services for 224 million Americans in 1975 will approach the \$100-billion annually. At that time, just six years in the future, the health services industry is expected to employ about six percent of the entire civilian working force. For every practicing physician today, there are 13 individuals with varying degrees of training and competency who join him in the delivery of medical care services. It is estimated that by 1975, the ratio of paramedical personnel to practicing physicians may be 20 to one.

**A national health insurance plan, of some type, is gaining support.** The National Governors Conference endorsed New York Governor Nelson Rockefeller's proposal for such a program and the move was supported by Republican governors as well as Democrats. A number of such plans are in the offing, including one from Senator Jacob Javits and another from United Auto Workers Union Chief Walter Reuther.

**At the current five percent rate of inflation,** in 25 years our present dollar will buy only what a dime bought in 1913. Tulsa's Jenkin Lloyd Jones, President of the National Chamber of Commerce, said that compared to the 1913 dollar, today's dollar already is worth only 27 cents. The editor of the Tulsa Tribune blamed the inflationary trend on deficit spending by the Federal Government, wage gouging by government favored labor unions and federal money sought by "chamber of commerce types."

**Latest move by the IRS includes the "discovery" that some agencies are not complying with certain IRS regulations.** Oklahoma's Department of Public Welfare has been "requested" by IRS to file an information return "with respect to payments made to any person during the calendar year where the payments to such person aggregates \$600 or more. Payments to be reported include

fees for professional services paid to physicians or others." According to the "request" this information is to be furnished to the IRS no later than February 28th, 1970. This means that the DPW must revamp, to some extent, its present bookkeeping system, and physicians will be asked to report their Social Security number to DPW.

**On September 4th the Senate Finance Committee open hearings on HR 13270,** the tax reform act. In addition to an extension of the surtax through December 31st, the bill contains provisions which uphold an IRS regulation that declares that unrelated business income of **all tax exempt organizations** (such as the OSMA) is subject to income tax. Washington experts say the bill passed the House of Representatives because of a report from the Ways and Means Committee which was prepared in large part by the IRS. The OSMA *Journal* and annual meeting are taxable now under IRS regulations.

**The British government may have figured out why nearly one-fourth of its new doctor graduates are leaving the country.** According to a recent survey the average British physician's income was only \$12,000 per year. After subtracting his business expenses he only had \$6,500 for his family.

**In this country George W. Melcher, Jr., M.D., President of Group Health Insurance,** has called for fixed fee schedules for physicians. He is quoted as saying that the practice of allowing providers to determine care and charges must be changed and that M.D.'s fees should be on a fixed schedule with "adequate compensation for time spent. . ."

**Be on the lookout for a new book, "At Your Own Risk: The Case Against Chiropractic."** The book is published by Pocket Books Company and is written by Ralph Lee Smith. A publisher's news release says, "Mr. Smith dissolves the notion that a chiropractor is a spinal specialist whose training differs from—but is not scientifically or technically inferior to—that of medical specialists . . . the book will frighten, enrage, and enlighten all those whose common assumption has been that their state legislatures thoroughly check the medical validity of chiropractic before licensing its practitioners." The book will be put on the American market during September. □



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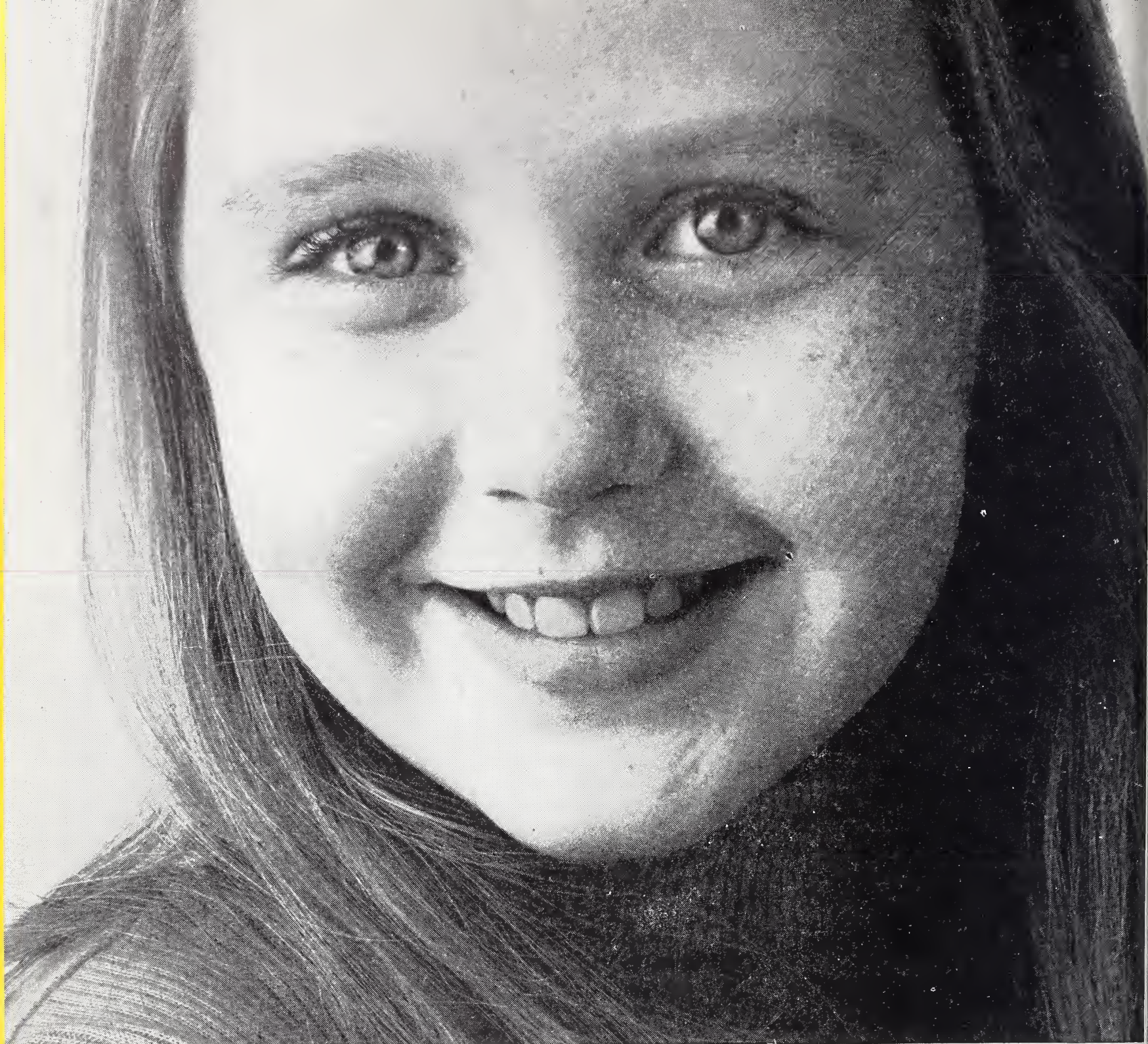


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**Warnings:** Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia.

In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.

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## Fan Letter . . .

Dear Doctor Youngturk:

I heard your speech at the meeting of The Newmed Society of America last Tuesday and I am taking this opportunity to congratulate you. It's about time somebody cut the doctors down to size. You hit the nail on the head when you said, "We've got to take the profit out of the practice of medicine." Once we get all the doctors on a government salary they'll be easier to control and they won't have to waste so much time trying to make their patients happy. Then we can increase the efficiency and reduce the cost of providing first class medical care. Kind of like the way we have increased the efficiency of the postal service . . . and reduced the cost of delivering first class mail.

I was one of those who stood up and applauded when you called the AMA "nothing but a labor union which supports a powerful lobby serving its own greedy objectives." If that organization isn't put out of business pretty soon it'll be calling strikes, demanding compulsory nation-wide membership and closed shops. The next thing you know, the AMA will be telling its members that they can work only fifty hours a week! I was shocked to learn a few years ago that the AMA actually encourages its members to take an active interest in politics and to provide financial support to favorite candidates. Now I ask you: What business do doctors have interfering with the work of social planners and professional politicians? The AMA has got to go!

You said, "Good medical care is a right and not a privilege in this affluent nation and everyone is entitled to the best care available regardless of his status or financial condition." I couldn't agree with you more! Of course in order to make this possible we're going to have to have a lot more doctors and nurses and technicians and ward aides and that sort. Since not enough people seem to be going into this line of work voluntarily, we're just going to have to set up a board of compulsory vocations . . .

like a draft board or something . . . which will supply the workers needed. So long as we tell them what kind of work they're going to do, we might as well tell them where they're going to do it. This will solve the great problem of distribution of medical services in this nation and won't infringe too much on the right of 'life, liberty and the pursuit of happiness.'

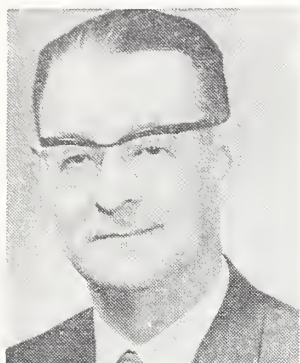
I'm sure you agree with me that an adequate diet, good stylish clothes and comfortable air-conditioned homes also represent rights and not privileges in this affluent nation of ours. Actually, all these things have a direct bearing on the health of the people and are, therefore, part of good medical care. Maybe we should secure these privileges even before we guarantee medical care since doing so would be the same as practicing preventive medicine which, you pointed out, the doctors were ignoring. Makes a lot of sense, doesn't it?

I was really impressed with the clarity of your thoughts and the complete lack of insecurity you displayed during your talk. All of us should be grateful that today's doctors haven't been subjected to the personality-distorting influences of depressions, world wars, one-meal days in school and no-vacation, no-pay internships. I think those things really warped a lot of the old-time physicians. Poverty does that to some people.

In closing I want to express my admiration for the courageous way you took care of our members who were bludgeoned by the police during our last demonstration. As it turned out, our members were cared for much more efficiently on the streets than they could have been in the emergency rooms . . . which were crowded with wounded policemen.

Very respectfully,  
John Greatplans, Pres.,  
Lofty Young Liberals, Inc.—*M.R.J.* ☐





Not the least benefit that the OSMA makes available to its membership is the sponsored professional liability insurance program.

If you will look at the premium you paid for coverage this year (not to mention the ten percent dividend returned on last year's premium), you will undoubtedly share my concern over a recent news release which reported that California physicians are paying from \$5,000 to \$12,000 annually for protection. (According to the California Medical Association, the standard rates actually range from \$900 to \$3,500, but many physicians who have had losses are subjected to extreme surcharges.) In other states—such as Alaska, Indiana, Pennsylvania and Utah—many physicians are finding it difficult to obtain coverage at any price.

In this day of high judgments, it is increasingly necessary for all physicians to

have high limits of professional liability coverage, and the arrangement provided by our Council on Insurance is considered to be one of the best in the nation.

Elsewhere in this issue is a complete discussion of the problem, as well as helpful hints on the prevention of malpractice claims. You are urged to read this article.

The Council on Insurance will make a concerted effort to present a comprehensive course on this subject to every county medical society in the state which will provide time on its program.

We must protect our favored status by continuing our good record in patient care and patient relations. Remember that each patient we see, each statement we make and each word we write represent malpractice risks for ourselves and for our colleagues.

An extra minute to explain medical problems to a worried spouse or patient, an extra moment to listen and an extra expression of empathy will convert many a potential legal adversary into a helpful ally.

Sincerely yours,

*Harold E. Denyer*



# Exfoliative Dermatitis and Generalized Erythroderma

MARK ALLEN EVERETT, M.D.

*Cases of generalized dermatitis can be classified according to the predominance of exfoliation or erythma. The etiology and course of the diseases seem different.*

**EXFOLIATIVE DERMATITIS** is a chronic, generalized desquamating inflammation of all or virtually all of the skin surface. *Erythroderma* is a term employed when erythema and infiltration are more prominent than exfoliation.

To determine if these distinctions are valid or useful, each record at the University of Oklahoma Medical Center from 1957 to 1967 has been reviewed.

## RESULTS

During the period July 1st, 1957 to June 30th, 1967, 48 adult patients with *exfoliative dermatitis* or *generalized erythroderma* were admitted to hospitals in the University of Oklahoma Medical Center. The ages at onset ranged from 15 to 88 years (Table 1). Because of the contrast in etiology and pathogenesis between the exfoliative patients and the erythrodermic patients, the two categories will be discussed separately.

### A. *Exfoliative dermatitis*

This group of 42 patients consisted almost

Table 1 Patients with Exfoliative Dermatitis or Erythroderma			
Age	at Onset	Males	Females
15-39		3	2
40-54		9	2
55-98		32	0

entirely of males beyond the age of 54 years. In addition to acute or subacute generalized dermatitis, prominent signs and symptoms included thickening of the fingernails, gynecomastia, and loss of body or scalp hair. Lymphadenopathy was present in one-half of the patients and was a prominent feature in 12. Although chilly sensations were common, fever was present in only three, and two of these had secondary pyoderma. Hypothermia was not recorded.

One-half of the patients with exfoliative dermatitis had antecedent chronic localized eczematous disease. Associated or underlying conditions are listed in Table II. In ten patients, exfoliation followed repeated systemic corticosteroid therapy for localized dermatitis. Results of laboratory tests were not uniform, but included: white count above 14,000 in nine of 42 patients; eosinophilia in 46 percent of the patients (five to nine percent in nine patients; over ten percent in ten patients). Serum protein determinations were made in 30 patients. In 13, the total serum protein was less than 6.0 grams percent. In 15 patients the globulin was equal to or greater than the quantity of albumin. The BUN was elevated in 17 patients and was above 20 mg.% in eight. The SGOT was above 100 in three of 15 patients without laboratory or physical evidence of hepatic

Presented to the Oklahoma State Medical Association, Saturday, May 17, 1969.



Table II

Etiology of Exfoliative Dermatitis		
Chronic Eczematous Disease		21
(lichen simplex; stasis; nummular eczema; etc.)		
legs	11	
hands	2	
both	4	
other	4	
Dermatitis Venenata		6
1° irritant	5	
allergic	1	
Papulosquamous		10
psoriasis	3	
seborrheic dermatitis	6	
lichen planus	1	
Atopic Dermatitis		2
Drug		1
Congenital		1
Lymphoma		1

disease. Fasting blood sugar determinations were above 125 mg.% in seven patients (30 percent). Biopsies obtained in 40 patients revealed varying degrees of chronic dermatitis except in one patient (with lymphoma) where malignant cells were seen.

B. Generalized Erythroderma

These six patients exhibited prominent erythema and minimal dry scaling. Pruritis was severe in all. None gave a history of antecedent localized eczematous disease. Initial blood count, bone marrow, and/or cutaneous biopsy revealed the presence of lymphoma in four of these erythrodermic patients. In two, a diagnosis of lymphoma was made on subsequent examination.

DISCUSSION

The etiology of exfoliative dermatitis as reported by various authors is shown in Table III. Although papulosquamous disorders are frequently mentioned in the five studies, the proportion contributed by psoriasis is quite variable. The relative importance of chronic eczematous disease, dermatitis medicamentosa, lymphoma, and the "unknown" category varies greatly. It is probable that the frequency of "unknown" is greater when the study is retrospective and from examination of histological specimens or charts.

Since the article by Montgomery (1932),<sup>2</sup> the importance of lymphoma of the skin as an underlying cause of exfoliative dermatitis

Table III

Etiology of Exfoliative Dermatitis and Erythroderma					
Author	Montgomery <sup>2</sup>	Wilson <sup>1</sup>	Gentile <sup>1</sup> et al.	Abrahams et al.	This Series
Date	1932	1954	1958	1963	1967
#Cases	73	51	135	101	42
Chronic eczema (includes atopic)	15	—	47	10	23
Contact der- matitis-eczema	1	15	—	3	6
Psoriasis	14	10	31	16	3
Seborrheic dermatitis	2	4	8	2	6
Other					
papulosquamous	3	0	1	0	1
Drug eruption	11	4	11	11	1
Congenital	1	2	1	2	1
Lymphoma	18	5	21	8	1
Unknown	7	10	14	47	—
Other	2	1	1	2	—

has been emphasized. The frequency with which lymphoma was diagnosed in exfoliative dermatitis decreased sharply following general recognition of dermatopathic lymphodermatitis as an entity.<sup>3</sup>

Only one patient of our 42 "exfoliative" patients had, or developed, lymphoma. During this same period, six other patients at the University of Oklahoma Medical Center had "generalized erythroderma" due to malignant lymphoma. In lymphoma patients, the skin was infiltrated and thickened rather than eczematous. Pruritis was severe and scaling was minimal. Individual scales tended to be dry rather than moist and inflammatory. All seven lymphoma patients presented a "leonine" face which contrasted sharply with the "dermatitic" picture of chronic exfoliative dermatitis.

The physical findings in our patients parallel those reported by others. Localized eczema was frequent and most commonly located on the legs. Gentile, *et al.*,<sup>1</sup> also noted antecedent acral eczematous dermatitis. The frequency of gynecomastia has not been explained. Circulating estrogens have been measured and found normal and there was no evidence for hepatic dysfunction.<sup>6,7</sup> It is possible that hypertrophy of breast and nipple are, like lichenification, a response to the trauma of scratching and rubbing. High output cardiac failure, attributed to increased plasma volume, was not observed in our series. Lymphadenopathy has been attributed to "reabsorption of various products of metabolism originating from the skin."<sup>8</sup> In our patients, the degree



and extent of adenopathy tended to parallel closely the degree and extent of pruritus. On the basis of physical findings alone, we were unable to subclassify exfoliative dermatitis into the classical divisions, i.e., Hebra, Wilson-Brocq, etc. Even such ordinarily distinct disorders as psoriasis were not self-evident when exfoliation had supervened.

In exfoliative dermatitis, hypoproteinemia and reversal of the albumin-globulin ratio are commonly reported. It has been estimated that up to 7.0 gm/day of serum albumin and 20.0 gm/day of epidermal protein may be lost in exfoliative dermatitis.<sup>6</sup> This compares with a normal hepatic albumin production of 20.0 gm/day and a circulating total of 250 grams. While the loss of albumin through the skin may be physiologically significant, the loss of epidermal protein is not. Although not observed in these 48 patients, hypothermia, elevated basal metabolism and increased venous pressure have been documented in exfoliative dermatitis.<sup>9, 10</sup> Increased basal metabolism was related to dermatitis and not to thyroid activity. The frequently reported eosinophilia may be related to the degree of lichenification.<sup>11</sup> Biopsies were seldom helpful in establishing etiology when dermatitis rather than erythroderma was predominant.

Three of the six patients with generalized erythroderma died from lymphoma during the observational period. Five of the 42 patients with exfoliative dermatitis died from the disease or complications therefrom. One death was due to reticulosis, three to bacterial infection, and one to adverse effects of corticosteroid therapy. The other patients recovered and were discharged from the hospitals. Twelve patients (28 percent) experienced recurrences of generalized dermatitis after varying periods of time. Many pa-

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tients experienced recurrent localized dermatitis which responded to topical therapy.

The term erythroderma was originally applied to those patients in whom loss of scale was less pronounced and erythema more prominent.<sup>3, 4</sup> In recent years, there has been a tendency to call all chronic generalized dermatitis "exfoliative dermatitis." Because of the differences in etiology of these two types of generalized erythemas, it is probable that the term erythroderma should be retained and restricted to those patients who have minimal scale and maximal infiltration and erythema.

## SUMMARY

Forty-eight adult patients with exfoliative dermatitis or generalized erythroderma were studied. Typically, exfoliative dermatitis developed from dissemination of localized dermatitis in this series. Elderly patients with localized eczematous disease of the lower extremity should be managed with the knowledge that they constitute the majority of patients who develop exfoliative dermatitis.

Lymphoma was diagnosed in only *one* of the 42 patients with exfoliative dermatitis. *All six* of the patients with generalized erythroderma had or developed lymphoma. Because of the differences in clinical picture, etiology and prognosis, maintenance of distinction between these two types of generalized dermatitis seems useful. □

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# Anesthetic Management of the Severely Traumatized Patient

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*Trauma patients present challenges in establishment of adequate ventilation, resuscitation of shock, diagnosis of associated injuries and evaluation of pre-existing medical conditions.*

## INTRODUCTION

THE EVER-INCREASING importance of trauma in our mechanized society is recognized by reference to public health statistics. Although trauma is the fourth leading cause of death in the United States, if atherosclerosis is considered as a single entity, trauma is the third leading cause of death. Trauma is the leading cause of death in the first three decades of life. Over 112,000 deaths occurred in the United States in 1967 as a result of accidents. Unlike most serious disease entities in the United States, the incidence of mortality from injuries is increasing each year.

The anesthetic management of the severely injured patient is a multifaceted problem. The traumatized patient may present any or all of the following magnified complications which distinguish him from the elective patient:

1. Lack of comprehensive preoperative evaluation
2. Airway problems
3. Multiple injuries
4. Alcohol intoxication
5. Full stomach
6. Shock

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These complications will exert considerable influence on the ultimate prognosis of the trauma patient and will be considered separately in detail.

## PREOPERATIVE EVALUATION

A history of pre-existing diseases, allergies or the nature of chronic drug therapy should be sought even in the severely injured, unreliable patient. The patient should be questioned carefully about previous therapy with steroids, tranquilizers and anti-hypertensives, for these drugs affect basic homeostatic mechanisms. Cardiovascular compensatory mechanisms may be severely impaired by the combination of previous drug therapy, severe trauma and anesthesia. The occurrence of major trauma in patients in either hypermetabolic or hypometabolic states, although rare, is possible in an era of increasing automobile and industrial accidents. In an analysis of 1161 anesthetics in acute trauma in 1964,<sup>1</sup> the overall mortality rate was found to be 5.34 percent. However, patients with pre-existing cardiovascular disease died at a rate of 10.4 percent. Those with pre-existing central nervous system disease had a 9.3 percent mortality. Those with multiple systems disease had a mortality of 9.2 percent.

## AIRWAY PROBLEMS

The one significant prerequisite in the successful resuscitation of the traumatized patient may be prompt establishment and maintenance of the airway. During the acute phase of traumatic emergencies, this prerequisite may be met by oral or nasal intubation or tracheostomy.

Preoperative tracheostomy has definite indications and is not a panacea for all respiratory problems. As a rule, preoperative



tracheostomy is required in patients with fractures of both mandibular condyles and the symphysis, in combined mandibular and maxillary fractures, and in patients in whom endotracheal intubation is technically impossible. Otherwise, an oral or nasal endotracheal intubation is preferable, because intubation is more rapid and less traumatic than a tracheostomy. An immediate, frantic tracheostomy should be a rare necessity<sup>2</sup> and may be deferred. If indications persist, tracheostomy is performed in a more orderly manner over the endotracheal tube. Intubation should be done under direct vision with a laryngoscope, so that loose fragments of bone, teeth or tissue will not be carried into the trachea by the advancing endotracheal tube. If the intubation is performed under vision these loose fragments can be removed with forceps as they are seen, and blood and mucous can be suctioned away leaving a clear unobstructed path for the tube.

On the patient's arrival in the operating room three basic problems require rapid appraisal and control: (1) The adequacy of ventilation based on the estimation of tidal volume, breath sounds, skin color and chest movements. (2) The adequacy of circulating volume evaluated from pulse rate, blood pressure levels and urine output. (3) The status of the heart may be assessed by the use of continuous cardioscopic and central venous pressure monitoring.

The patient should be oxygenated by mask, allowing time for placement of intravenous infusions, further appraisal of the patient's status, and protection against hypoxia during induction. Preoxygenation may, however, be impossible in patients with traumatic distortion of the face and neck, airway obstruction from blood or debris, or where the urgency of the surgical emergency precludes the time required.

If general anesthesia is selected for the emergency repair of trauma, endotracheal intubation is necessary to facilitate control of ventilation and to protect the airway. After consideration of the preanesthetic condition, the patient may be intubated awake, or following rapid induction.

Induction of anesthesia is probably the most hazardous time in the total anesthetic period. It is during this time that hypoten-

sion, hypoxia, arrhythmias and vomiting are prone to occur. The patient in hypovolemic shock or with central nervous system depression has a marked reduction in pain perception and memory. Awake intubation may avoid many dangers which may occur on induction of anesthesia, is generally easily performed and is far less distressing to the patient than most physicians anticipate.<sup>3</sup>

Use of topical anesthesia may facilitate awake intubation in the more alert patient with a full stomach or hypotension. We prefer gentle laryngoscopy and spray application of four percent "Xylocaine" to the tongue, oropharynx and superior surface of the larynx. The bulk of clinical evidence confirms that intubation with topical anesthesia is a safe procedure in the patient with a full stomach,<sup>4</sup> although the theoretical possibility exists that aspiration could occur due to reduced sensitivity of laryngeal tissues.

Intubation under general anesthesia will require consideration of other factors such as restoration of circulating volume and identification of associated injuries of the cervical spine, thorax or abdomen. For example, the patient with extremity trauma and compensated hypovolemia from an undiagnosed splenic rupture may experience severe hypotension following the usual induction dose of thiobarbiturate.<sup>5</sup>

The stomach should be decompressed with a nasogastric tube prior to induction even though several hours have elapsed since the last meal.

Rapid intravenous induction is accomplished by injection of a small dose of thiopental (50-200 mg) followed by a full paralyzing dose of succinylcholine (60-100 mg). A cuffed endotracheal tube is inserted when paralysis is complete. The lungs must not be manually ventilated until the endotracheal tube is in place and the cuff inflated. Inhalation induction using nitrous oxide or cyclopropane to induce sleep followed by succinylcholine is preferred if the patient is hypotensive and thiopental is felt to be contraindicated.

As soon as the patient loses consciousness, an assistant exerts firm backward pressure on the cricoid, compressing the esophagus between the broad, flat posterior aspect of the cricoid and the body of the sixth cervi-



cal vertebra.<sup>6</sup> In this way, gastric fluids are prevented from entering the pharynx from below. Cricoesophageal compression must be maintained from the injection of the thiobarbiturate until the endotracheal tube cuff is inflated and the airway is secure. The endotracheal tube is not removed post-operatively until the patient is fully conscious and in control of his protective reflexes and has adequate respiratory exchange. The anesthesiologist utilizing the rapid intravenous induction should be cautioned against the possibility of anesthetic overdose if "potent poisons are pumped into paralyzed permissive patients."<sup>7</sup> It is important to consider the hazards of rapid induction techniques on trauma patients with marked alterations of anatomy and physiology.

Having secured the airway, ventilation is established with special attention to the following points:

1. Adequate respiratory exchange is provided to maintain oxygenation and prevent atelectasis.

2. Pressure in the anesthesia circuit is reduced to zero following each inhalation to avoid increased intrathoracic pressure with subsequent reduction of venous return to the heart.

3. Respiration is controlled in order to reduce the diversion of cardiac output to the work of breathing.

4. Respiratory adequacy can be monitored by blood-gas analysis to assure that pH, PCO<sub>2</sub> and PO<sub>2</sub> are in a normal range.

The endotracheal tube may be left in place as long as 48 hours to support ventilation or maintain the airway until the patient can satisfactorily perform these functions. Meticulous care is as important for the indwelling endotracheal tube as for the tracheostomy. It is probable that complications of indwelling nasotracheal intubation are very similar to those of tracheostomy. Reported in the literature and frequently seen clinically are obstruction from cuff slippage, cuff overinflation, kinking or inspissated secretions; erosion producing laryngeal granulomas, ulcerations, tracheoesophageal fistulae; and infection from maxillary sinuses to the alveoli, usually with hospital type

organisms. Post intubation granulations and stenoses are unusual, even rare complications, but meticulous care by physicians and nursing staff is the key to their prevention. This care should include complete humidification of the inspired atmosphere, frequent suctioning with sterile catheters and periodic instillation of mucolytic agents such as actelcystine or streptokinase-streptodornase.

In the desperate asphyxial emergency where there is supraglottic obstruction, oxygenation can be established by insufflating oxygen at a high flow through a 15-gauge needle inserted through the cricothyroid membrane. This procedure will allow an orderly approach to establishing an adequate airway by tracheal intubation or by tracheostomy.

#### MULTIPLE INJURIES

Problems arise in determining priorities for operative intervention when injuries involve multiple areas.<sup>5</sup> In patients with head injuries, the associated injuries of the abdomen, groin, axilla or neck may compel initial consideration.<sup>8</sup> One must, however, be alert to change in the patient's neurologic status during the course of anesthesia. The pupils may be the best indicators. Progressive reduction of the required anesthetic concentration may indicate progression of the neurologic deterioration. Conversely, if the head injury is the primary target of the

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surgical effort, the anesthesiologist should be alert for the progression of associated trauma such as pneumothorax, hemoperitoneum and cardiac tamponade. Shock is rarely a manifestation of head injury and its occurrence in the presence of head injury should lead one to suspect injuries in other areas.<sup>9</sup> Unusual diagnostic skill may be needed to define the appropriate associated injury, the effects of which are manifest only after a surgical procedure is progressing in another area. For example, hemorrhage from a torn spleen or liver may be minimal and compensated as an operation to correct extremity trauma begins. The occurrence of shock, as the procedure progresses, may compel an accurate definitive diagnosis and proper corrective surgery. Under these circumstances, treatment with osmotic diuretics, vasodilators, vasopressors, or other drugs used as adjunctive therapy of shock will influence the vital signs and confuse the diagnosis.

#### ALCOHOL INTOXICATION

Based largely on animal studies, it has been stated frequently that the manifestations of shock are more severe in the drunk patient than in the sober patient. However, mild to moderate intoxication (blood alcohol 100-125 mg./100 ml.) is reported to have no effect on the incidence of hypotension, morbidity or mortality of surgical treatment for trauma; whereas levels above 250 mg./100 ml. do seem to influence these variables.<sup>10</sup>

#### FULL OR NON-EMPTIED STOMACH

The primary hazard of the full stomach is vomiting and aspiration of the vomitus. Due to shock, anxiety, abdominal or central nervous system trauma, peristalsis may cease at the time of the accident. Therefore the time elapsing from the last meal to the accident is more important than the time from the last meal to the induction of anesthesia. Whenever possible, induction of anesthesia should be delayed until it is certain that the stomach is empty. When delay of a surgical procedure is not medically feasible, regional anesthesia should be selected for these patients. However, regional analgesia is contraindicated in patients hav-

ing hypovolemia and technically contraindicated in agitated, intoxicated patients.

Awake intubation with or without topical anesthesia, and the "crash induction" with cricoesophageal compression are alternatives when the induction of general anesthesia is mandatory.

In spite of these precautions the occasional patient will aspirate gastric contents either before, during or after anesthesia. Aspiration of vomitus generally assumes one of two clinical pictures. First is aspiration of undigested food particles resulting in respiratory obstruction and distress. Depending on the amount of material aspirated, patients may have acute fulminating respiratory distress, with cyanosis and cardiac arrest or a milder more chronic course leading to lobar pneumonia and lung abscess. The findings are usually localized to an area of the lungs. A second form, Mendelson's syndrome, results from aspiration of liquid gastric secretions which are acid and cause a chemical pneumonitis. This form of aspiration is probably more common and is just as hazardous in terms of morbidity and mortality. Mendelson's syndrome is manifest by bronchospasm which is usually generalized, tachypnea, labored respirations and cyanosis. The hypoxia if sufficiently severe will lead to cardiac arrest. Therapy of the acute episode includes endotracheal suctioning, topical instillation and intravenous hydrocortisone or other anti-inflammatory steroid, and ventilatory support with increased inspired oxygen concentration. Bronchoscopy is probably indicated only if the patient has aspirated food or other foreign matter. Tracheobronchial lavage with warmed saline solution to dilute the acid aspirant is recommended by many authorities, but its efficacy and safety remain controversial.

#### SHOCK

Manifestations of hypovolemic shock were present in eight percent preoperatively and 12 percent intraoperatively of a series of 1161 patients requiring emergency surgical correction of traumatic injuries.<sup>1</sup> The simultaneous infusions of type specific whole blood and balanced electrolyte solutions are recommended for the resuscitation of patients in hypovolemic shock. The volume of



infusion must depend on the estimated blood loss and the severity of trauma.

Balanced salt solution is infused to correct the deficit in functional extracellular fluid volume which has been demonstrated to occur in hypovolemic shock and severe tissue trauma.<sup>11-15</sup> The efficacy of this form of therapy has been confirmed by numerous reports involving both experimental shock in animals and hemorrhagic shock in man.<sup>16-36</sup> However, there are differences of opinion regarding the validity of the experimental techniques used to demonstrate the functional extracellular fluid deficit. Some investigators have been unable to support the concept of selective extracellular fluid deficit in hemorrhagic shock or operative trauma<sup>37, 38</sup> and have warned against unwarranted infusion of large amounts of salt containing solutions particularly in elderly patients with cardiovascular, hepatic or renal disease.<sup>37-44</sup> The controversy over fluid therapy serves to crystallize a rational and moderate approach to fluid and blood therapy during the treatment of shock. The following principles are used as guidelines to the rational and moderate approach.<sup>45</sup>

1. The use of balanced salt solution is not a substitute for whole blood. Whole blood is still the primary therapy for blood loss and shock.

2. Blood should be given during major surgery whenever losses exceed 20 percent of the estimated blood volume.

3. Administration of a balanced salt solution is intended to replace extracellular fluid which is functionally sequestered as interstitial or intercellular edema.

4. It is our practice to give lactated Ringer's solution to hypotensive emergency room patients while type specific whole blood is being obtained. During surgery, blood loss is replaced with blood plus lactated Ringer's solution at seven to 15 ml/kg/hr. The quantity depends on the general condition of the patient, the severity of tissue injury and the area of peritoneum or pleura exposed. Patients with cardiac or renal disease deserve special consideration and care in fluid therapy, although in general they tolerate a mild overload better than a mild deficit.

5. Intravenous infusions should be

warmed to avoid myocardial hypothermia and irreversible cardiac arrhythmias. Warming of blood will also reduce the concentration of potassium in the plasma and to some extent reverse the acidosis of banked blood.<sup>46, 47</sup>

Other important considerations for the care of hypovolemic shock include the following, although not necessarily in the order in which they are listed:

1. Calcium gluconate may be given to antagonize hyperkalemia, to prevent citrate intoxication and to strengthen the force of myocardial contractions.

2. Sodium bicarbonate is given to correct the acidosis produced by anerobic metabolism and infusion of acidotic blood.

3. Steroids in large doses may be given although their efficacy is not firmly established.

4. Vasodilators are felt by some to offer protection to the microcirculation during the low flow state as well as reduction in cardiac work. Chlorpromazine and phenoxybenzamine are currently the most popular drugs for this purpose.

Weil has recommended that the pharmacologic treatment of shock including vasoconstrictors, steroids and diuretics be relegated to a secondary role following sincere efforts to correct ventilation and volume.<sup>48</sup> Having accomplished these goals, if evidence of severe vasoconstriction persists, vasodilators may be helpful.

#### CHOICE OF ANESTHETIC

The patient with severe hypovolemic hypotension will be apathetic or unresponsive to painful stimulus or to spoken questions and commands. He will have a weak or imperceptible pulse and blood pressure, cold-blanching skin, dry conjunctivae, dilated pupils and gasping respirations. This patient needs no anesthetic agent at all. An endotracheal tube should be inserted without anesthesia and ventilation should be established with oxygen. As the bleeding is controlled surgically and circulating volume is restored, the patient's responsiveness may return. Anesthetic agents can then be added to the inspired oxygen. Care must be exercised to distinguish pain from hypovolemic anxiety or hypoxic delirium. Pre-



medication should be minimal, and should be given slowly by the intravenous route. The low flow state associated with hypotension may result in delayed effects of subcutaneously administered drugs. Anticholinergic drugs are frequently necessary, but should be used with caution in the presence of a rapid pulse. Barbiturates may precipitate maniacal behavior in the injured patient, and narcotics may depress respirations and increase intracranial pressure, undesirable in the patient with head injuries. Regional anesthesia was used in 15 percent of the 1161 patients in our 1964 survey. In selected patients regional anesthesia is extremely safe and effective. However, regional anesthesia should not be selected for the drunk, aggressive, combative, hypoxic or excited patient. In such cases the technique is doomed from the start and the failure serves only to crystallize opinion against regional anesthesia in trauma patients. Spinal anesthesia should not be used in the hypovolemic patient as sequestration from sympathetic paresis will alter circulatory compensation and dangerous hypotension may result.

General endotracheal anesthesia generally provides good operating conditions. Inhalation agents are preferred because the depth of anesthesia may be readily altered. Control of airway ventilation and oxygenation is more easily assured. The choice of agent or combination of agents is largely assured. The choice of agent or combination of agents is largely academic. Ultrashort acting barbiturates should be used with great care as cardiovascular collapse may be rapidly precipitated by even very small amounts in the presence of shock or compensated shock. A technique should be selected which will provide the highest oxygen concentration and one with which the anesthesiologist is most familiar. Cyclopropane in ten percent to 20 percent concentrations with suitable muscle relaxants provides adequate oxygen concentrations and satisfactory operating conditions and cardiovascular homeostasis is well maintained. Ethyl ether in analgesic planes is a safe and useful agent if the anesthesiologist is familiar with its use. The value and safety of the newer intravenous neuroleptics has not been proven in the severely injured patient. Severe hypotension in the

hypovolemic patient and in the elderly has been observed. An added drawback is the inability to rapidly lighten the level of anesthetic.

The use of halothane or methoxyflurane in the hypovolemic hypotensive patient is subject to controversy. A commonly used technique is nitrous oxide, relaxant and controlled ventilation or oxygen and relaxant alone. It should be remembered that complete suppression of sensation is not necessary and may be dangerous if achieved by deep anesthesia. Extensive surgical procedures may be accomplished in analgesic planes of anesthesia, supplemented by judicious use of curare, gallamine or succinylcholine.

#### MONITORING FOR TRAUMA PATIENTS

Blood pressure, pulse, skin color, capillary filling time and pupil size should be monitored during all anesthetics. In addition, the central venous pressure should be monitored to detect early cardiac failure and overload with colloid solutions such as blood or dextran in severely injured patients or those with a history of heart disease. The hourly urine output should be monitored to determine the efficacy of fluid therapy. The urine output should be at least 50 ml./hr. if the extracellular fluid volume is being adequately replaced with a balanced salt solution and the patient is not in renal failure.

#### POSTOPERATIVE MANAGEMENT

The manifestations of multiple traumatic injuries may not all appear at the same time. Following successful operative correction of damage in one or more areas, the patient must be observed for evidences of injury in other sites. The usual principles of good recovery room care must be applied. These include oxygen by mask, at least until the patient is awake and oriented, and periodic use of intermittent positive pressure breathing with the nebulization of a wetting agent and a bronchodilator drug if thick secretions and/or bronchospasm interfere with adequate ventilation. Frequent turning of the patient from side to side, and frequent monitoring of the blood pressure, pulse rate,



adequacy of ventilation, urine output, fluid infusion and gastric suction are all indicated. The progressive state of emergence from anesthesia and external evidences of continued or recurring blood loss should be noted.

# SUMMARY

The importance of trauma as a cause of death and disability in our society is increasing daily. The trauma patient presents challenges in establishment of adequate ventilation, resuscitation of shock, diagnosis of associated injuries and evaluation of pre-existing medical conditions. The patient's prognosis depends on how well these challenges can be met in the time available prior to surgical correction. The choice of anesthesia varies from the use of oxygen alone for the patient who is unconscious from shock, central nervous system trauma or alcohol intoxication to the full range of anesthetic agents for the patient in whom homeostasis has been completely corrected. In spite of the controversy over fluid therapy, simultaneous infusions of type specific whole blood and a balanced electrolyte solution probably represent the most effective primary therapy for hypovolemic shock. A bibliography on the use of fluids in shock is presented.

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# Geographic and Secular Variations in Malignant Disease in Oklahoma, 1956-65

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*Increased recognition and treatment of precancerous lesions may explain the decrease in mortality from cervical cancer in Oklahoma. The mortality is more prevalent in the eastern counties.*

## II Cancer of the Reproductive Organs (ISC 170-179)

### INTRODUCTION

VARIATION IN DISEASE frequency among different subpopulations may provide important clues to the etiology of a disease. Numerous examples can be cited in the existing literature where geographic or secular variations in disease incidence or mortality have been associated with some aspect of the human environment or genetic composition of the population aiding in the identification of a determinant of a disease frequency.

The purpose of the present study was to make observations on the geographic distribution of deaths from malignancies in the

counties of Oklahoma in order to identify clusters of high and low mortality occurring between 1956 and 1965. An attempt has been made to correlate these clusters with features in the environment which might be influencing death rates. This second report deals with malignancies of the reproductive systems in males and females.

*Cancer of the Cervix Uteri:* Despite the consistent decline in age-adjusted death rates of cancer of the cervix uteri, thousands of women continue to die annually from cancer originating at this site. Actually it is a major killer of white females in the United States, and the leading cancer killer of non-white females.<sup>17</sup>

The probability of developing cancer of the cervix is greater in married than in single women.<sup>2</sup> Early age of marriage and instability of marriage are associated with an increased incidence of the disease.<sup>18</sup> Other variables such as illegitimate birth, syphilis, early sexual relations, multiple sexual partners, and prostitution also are associated with an increased risk of cancer of the cervix.<sup>27</sup>

Reports by Terris and Oalman showed widely discrepant age-adjusted death rates for cervical carcinoma in different population groups.<sup>23</sup> In New York City, the rates were lowest among Jewish women and highest among Puerto Rican females.<sup>11</sup> Stamler, *et al.*<sup>22</sup> found carcinoma of the cervix mor-

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tality at all ages to be significantly higher in nonwhite than in white women.

Prevalence of cervical cancer also appears to be influenced by socioeconomic factors as increased rates are found in populations with lower socioeconomic status.<sup>22</sup> Tokuhata<sup>24</sup> found the level of genital hygiene and obstetrical care in cervical cancer patients and the hygienic standards of their husbands to be generally low. Stock showed a correlation between cancer of the cervix and (1) social class distribution and (2) overcrowding.<sup>20</sup> Higher rates were found in poorer sections of Pittsburg and Copenhagen.<sup>3, 20</sup>

White women in the southern cities of the United States experience a greater risk than do northern women.<sup>5</sup> Excessive risk appears among urban women in Iowa<sup>12</sup> and Copenhagen.<sup>3</sup>

*Cancer of the Breast:* One of the most interesting aspects of cancer of the breast is the stability of mortality trends over the past several years.<sup>17</sup> Lilienfeld reported an increased frequency of breast cancer among those who never married over those who have married.<sup>16</sup> Gagnon showed that nuns and single women have a high incidence of cancer of the breast.<sup>6</sup>

International comparisons of mortality reveal a strikingly low death rate for Japan and a high death rate for the United States.<sup>17</sup> Although there are no significant geographic variations reported within the western hemisphere, the whites experience higher rates than the nonwhites.<sup>26</sup>

The incidence of and mortality from breast cancer were higher in upper socioeconomic<sup>9</sup> and urban areas of the United States.<sup>15</sup> Breast cancer mortality correlates directly with cancer of the endometrium but inversely with cancer of the cervix uteri in various subpopulation studies.<sup>7</sup>

*Cancer of the Ovary:* Little has been reported on the epidemiology of cancer of the ovary. The report by West shows an interesting age curve, with a dramatic increase after age 40 and then a decline after age 70. He also reported that the never married have higher mortality rates than the married.<sup>25</sup> Data on socioeconomic status of cancer of the ovary patients were inconclusive.<sup>4</sup> Results of studies on urban-rural differences

are not consistent. For instance, the 1950 morbidity rates of ovarian cancer were higher in urban than rural Iowa.<sup>12</sup> Higher ovarian morbidity rates were reported in the metropolitan areas of Connecticut.<sup>10</sup> However, Stock<sup>21</sup> found no consistent increase in mortality from ovarian cancer outside London.

*Cancer of the Prostate Gland:* Reports from Connecticut<sup>10</sup> and a ten-city survey in the United States<sup>4</sup> indicate that an increase in age-adjusted incidence from prostatic cancer has occurred in both races over the last several years. Cancer of the prostate gland mortality is higher among nonwhites than among whites in the United States.<sup>14</sup>

Several reports emphasize a relationship between sexual behavior and prostate cancer. The disease is reported to be higher among men with increased sexual activity.<sup>14</sup>

There is a higher prostate cancer rate for both whites and nonwhites of the northern areas of the United States than for the southern areas.<sup>8</sup> There is little difference in mortality rates for cancer of the prostate reported between urban and rural areas and between metropolitan and non-metropolitan counties of the United States.<sup>14</sup>

#### METHODS AND PROCEDURES

Mortality data were obtained from death

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Table 1  
Cancer Deaths By Specific Site, Oklahoma (1956-1965)  
(Numbers in parenthesis indicate order of rank in relation to 34 major sites of cancer)

Cancer Site	Code	White Male	White Female	Nonwhite Male	Nonwhite Female	Total
Breast	170	14 (31)	2362 (1)	1 (28)	194 (2)	2570 (3)
Cervix Uteri	171	—	909 (4)	—	201 (1)	1110 (10)
Corpus Uteri, Uterus and others of female organ	172-4, 176	—	834 (6)	—	139 (4)	973 (11)
Ovary, Fallopian Tube	175	—	864 (5)	—	79 (8)	943 (12)
Prostate	177	2035 (2)	—	281 (1)	—	2316 (5)
Testis and Others of Male Organ	178-179	122 (23)	—	7 (22)	—	129 (29)
Total		2171	4969	289	613	8042

certificates filed in the office of vital statistics, Oklahoma State Health Department. Information from all resident death certificates from malignancies filed between 1956 and 1965 was transferred to IBM cards for tabulation.

Deaths from malignant disease were subclassified by sites of involvement using the 1955 International Statistical Classification (ISC) of disease.<sup>28</sup> The data in this report includes an analysis of malignancies involving the following sites:

ISC Code	Specific Site
170	Breast
171	Cervix uteri
172-4, 176	Corpus uteri, uterus, other of female organ
175	Ovary, Fallopian tube, broad ligament
177	Prostate

The data were grouped into two five-year periods (1956-60, 1961-65) to establish secular trends, by sex and race (white, non-whites) and by age (<5, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75+) to quantify age-sex-race specific rates and by county to establish geographic distribution. The Oklahoma resident population by age-sex-race and county was estimated for the mid-point of each five-year period from the 1950 and 1960 censuses.

The direct method of adjustment,<sup>13</sup> using the 1960 Oklahoma white male census as the standard, was utilized to calculate age-sex-race adjusted death rates per 100,000 populations for the 77 Oklahoma counties for the two five-year periods. The average annual age-adjusted death rates for the entire ten year period were tabulated by county and plotted on Oklahoma maps.

Ideally, we would like to determine if the disease frequency formed patterns of irregular distribution (clustering) or was randomly distributed within the state. Therefore, based on the mortality rate for each malignancy by site, the 77 Oklahoma counties were divided into four quartiles. Three or more adjacent counties in the highest or lowest quartiles were examined as a "cluster."

Counties in the state were designated as (1) metropolitan, if the county contained a major city with a population over 30,000; (2) non-metropolitan, if the county contained a major city with a population between 15,000 and 30,000; or (3) rural, if the county did not contain a major city with a population of at least 15,000 in order to examine differences in mortality between urban and rural areas. Based on the 1960 Oklahoma census, ten counties are classified

Table 2  
Age-Sex-Race Specific Death Rates for Cancer of the Cervix Uteri (ISC 171)

Age	Oklahoma: 1956-60, 1961-65 Rates Per 100,000 Population			
	White Female		Non-White Female	
	1956-60	1961-65	1956-60	1961-65
<5	0.0	0.0	0.0	0.0
5-14	0.0	0.0	0.0	0.0
15-24	2.7	0.0	0.0	0.0
25-34	17.8	14.8	46.1	63.3
35-44	58.5	37.3	80.0	117.4
45-54	86.2	67.9	202.0	160.9
55-64	118.3	86.9	385.7	211.2
65-74	122.8	103.7	377.7	177.0
75+	161.3	148.6	565.9	222.7
AADR*	44.4	34.3	119.0	79.7

\*AGE ADJUSTED DEATH RATE Based on the 1960 State White Males as the Standard Population.



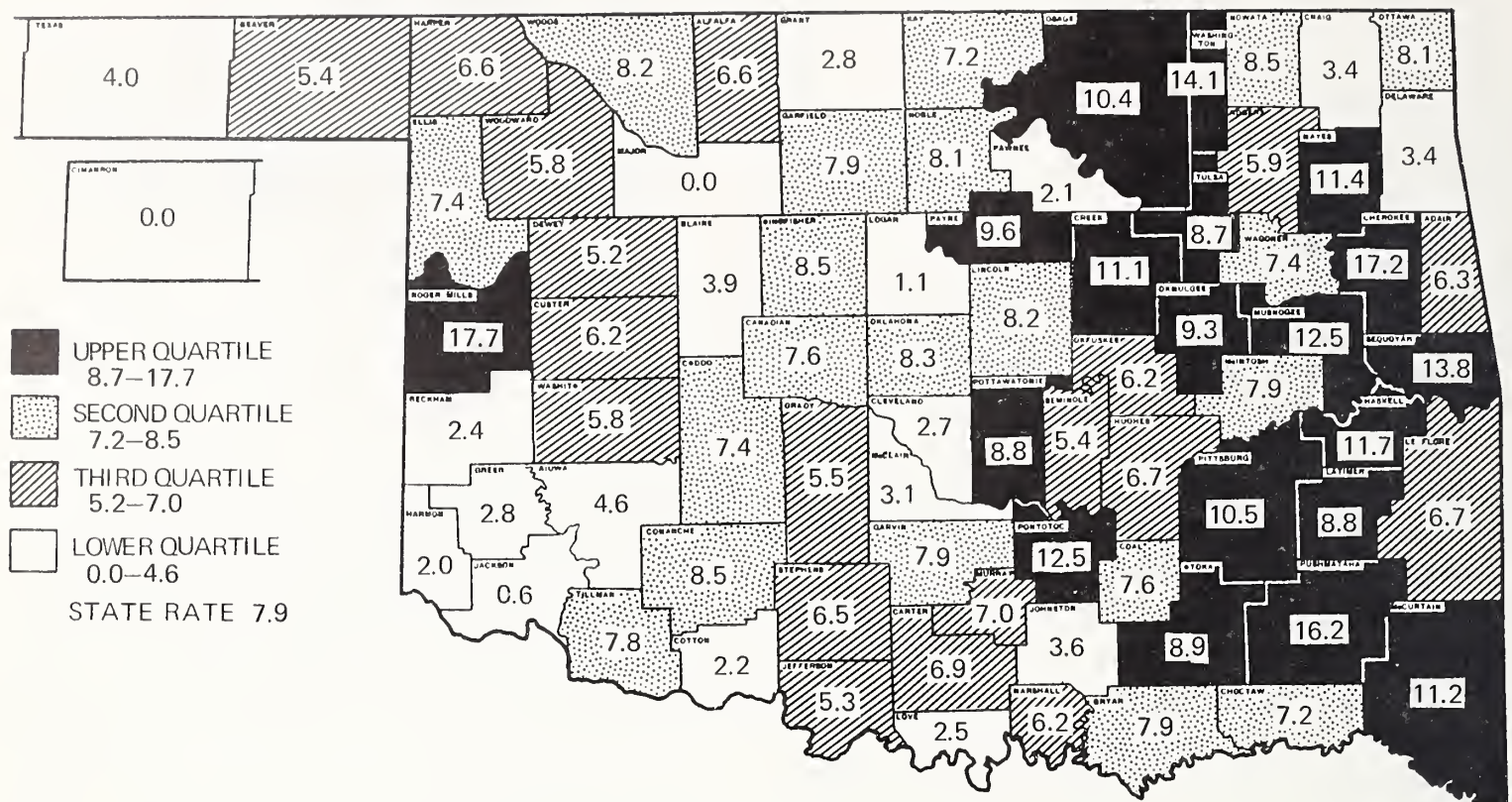


Figure 1. Average Annual Age-Adjusted Death Rates of Cancer of the Cervix Uteri by County, Oklahoma, 1956-1965, White Female.

as metropolitan; 17 at non-metropolitan, and 50 as rural. To ascertain if significant differences in mortality existed among the three urbanization classes, the white male and female average annual age-adjusted death rates by county were ranked and tested by the Kruskal-Wallis rank test.<sup>19</sup>

The socioeconomic distribution of Oklahomans by county of residence was deter-

mined through an index utilizing the major determinant of socioeconomic status mainly; (1) the average per capita income, (2) educational level, (3) condition of housing, and (4) the number of persons per 100,000 receiving aid to dependent children (ADC).

## RESULTS

Cancer of the cervix uteri was the leading cause of cancer death among the nonwhite females and the fourth leading cause of cancer death among the white females. Cancer of the breast was the leading cause of cancer death among the white females and the second leading cause of cancer death among the nonwhite females during the ten year period studied. Ovarian cancer ranked five and eight among white and nonwhite females respectively as a cause of cancer death. Cancer of the prostate was the most common malignancy in nonwhite males and the second leading cancer site in white males (table 1).

The age-sex-race specific and adjusted death rates for cancer of the cervix uteri (ISC 171) among Oklahoma females decreased during the period under study. This

Table 3

Age-Sex-Race Specific Death Rates for Corpus Uteri, Uterus and Others of Female Organ (ISC 172-174, 176)

Age	Oklahoma: 1956-60, 1961-65 Rates Per 100,000 Population			
	White Female		Non-White Female	
	1956-60	1961-65	1956-60	1961-65
<5	0.0	0.0	0.0	0.0
5-14	0.0	0.0	0.0	0.0
15-24	0.0	0.7	6.3	0.0
25-34	3.7	3.3	15.3	0.0
35-44	18.3	9.7	24.0	41.9
45-54	40.2	22.1	131.7	67.7
55-64	108.3	75.8	294.9	150.8
65-74	177.5	145.9	346.2	221.3
75+	308.8	249.0	238.3	445.5
AADR*	39.8	29.6	78.9	57.2

\*AGE ADJUSTED DEATH RATE Based on the 1960 State White Males as the Standard Population.



Table 4  
Age-Sex-Race Specific Death Rates for Cancer of the Breast (ISC 170)

Age	Oklahoma: 1956-60, 1961-65 Rates Per 100,000 Population			
	White Female		Non-White Female	
	1956-60	1961-65	1956-60	1961-65
<5	0.0	0.0	0.0	0.0
5-14	0.0	0.0	0.0	0.0
15-24	0.7	0.0	6.3	0.0
25-34	18.6	17.4	46.1	15.8
35-44	86.4	83.0	96.1	126.0
45-54	234.5	197.0	237.2	110.1
55-64	266.7	274.7	226.9	301.8
65-74	329.8	343.7	157.4	324.7
75+	431.7	492.2	327.7	618.8
AADR*	101.5	100.4	88.7	101.3

\*AGE ADJUSTED DEATH RATE Based on the 1960 State White Males as the Standard Population.

decrease was more dramatic among the non-white females than the white females. The nonwhites experienced much higher rates than the white females (table 2). The geographic distribution of average annual adjusted mortality by county for cancer of the cervix uteri indicates that cervical cancer is more prevalent in the eastern counties of the state. Actually, all the upper quartile counties except for one are located in the eastern half of the state (figure 1).

Death rates in Oklahoma from cancer of

Table 5  
Age-Sex-Race Specific Death Rates for Cancer of the Ovary, Fallopian Tube and Broad Ligament (ISC 175)

Age	Oklahoma: 1956-60, 1961-65 Rates Per 100,000 Population			
	White Female		Non-White Female	
	1956-60	1961-65	1956-60	1961-65
<5	0.0	0.0	0.0	0.0
5-14	1.5	0.9	0.0	0.0
15-24	4.0	2.1	0.0	19.4
25-34	5.2	4.1	15.3	0.0
35-44	24.1	22.4	32.0	16.7
45-54	82.9	64.8	61.4	33.8
55-64	107.2	121.1	158.8	160.9
65-74	126.8	139.9	173.1	118.0
75+	131.3	156.3	89.3	123.7
AADR*	36.8	37.0	41.8	35.6

\*AGE ADJUSTED DEATH RATE Based on the 1960 State White Males as the Standard Population.

the corpus uteri, uterus and other female organs (ISC 172-174, 176) have decreased for both white and nonwhite females. As in cancer of the cervix uteri, nonwhite females experienced much higher rates than did white females (table 3). The geographic distribution of these malignancies appears to be randomly distributed.

Age-adjusted death rates for cancer of the breast (ISC 170) remained stable during the ten-year period studied for the white females, but there was a slight increase

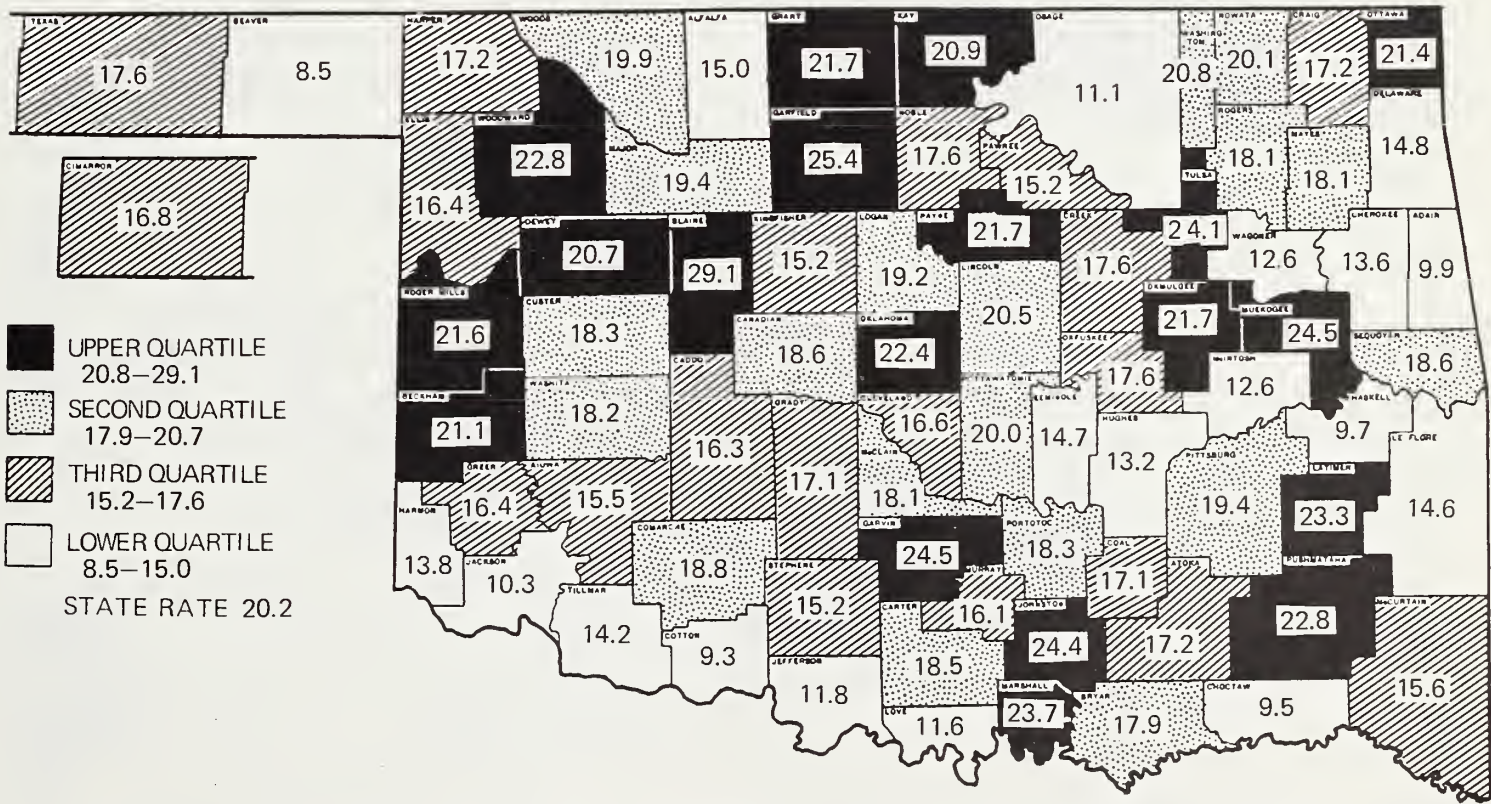


Figure 2. Average Annual Age-Adjusted Death Rates of Breast Cancer by County, Oklahoma, 1956-1965, White Females.



among the nonwhite females (table 4). Clusters from the highest quartile of age-adjusted breast cancer mortality are found primarily in the northwestern parts of the state (figure 2).

Cancer of the ovary, fallopian tube, and broad ligament (ISC 175) mortality remained stable for the Oklahoma white females but decreased slightly among the non-white females. The adjusted death rates for the whites and nonwhites are similar (table 5). The geographic distribution of average annual adjusted mortality for the ten-year period shows a random distribution except for two, probably insignificant, cluster areas, one in the northwest and another in the east central part of the state (figure 3).

The age-sex-race specific and adjusted death rates for cancer of the prostate gland (ISC 177) increased slightly in the non-white Oklahoma males during the period under study but remained stable in the white males. Higher rates are reported for the nonwhites than for the white males (table 6). The geographic distribution by county of residence indicates high cluster areas exist in the northwestern, southwestern, and east central counties (figure 4).

The average annual age-sex adjusted

death rates for the white population for the Oklahoma counties indicate a significant increase in mortality with degree of urbanization for cancers of the breast and cervix uteri ( $p < .001$ ). No significant differences in urban-rural mortality rates are indicated for cancers of the ovary and prostate gland (table 7).

The age-adjusted mortality for cancer of the cervix is impressively increased in areas where socioeconomic status is low (figures 5 and 1). Cancers of the breast and prostate appear to be slightly more prevalent in the upper socioeconomic districts (figures 2, 4, and 5) and there is no apparent variation in mortality from cancer of the ovary in the different socioeconomic areas (figures 3, 5).

## DISCUSSION

### Secular Trends

The secular trends of adjusted mortality from malignant disease of the reproductive organs in Oklahoma for the two five-year periods studied are consistent with the trends reported for the rest of the United States,<sup>17</sup> mainly, a decline in death rates from cancer of the cervix uteri, corpus uteri, and uterus and stable death rates from cancer of the breast, ovary and prostate gland.

Several factors will have to be considered

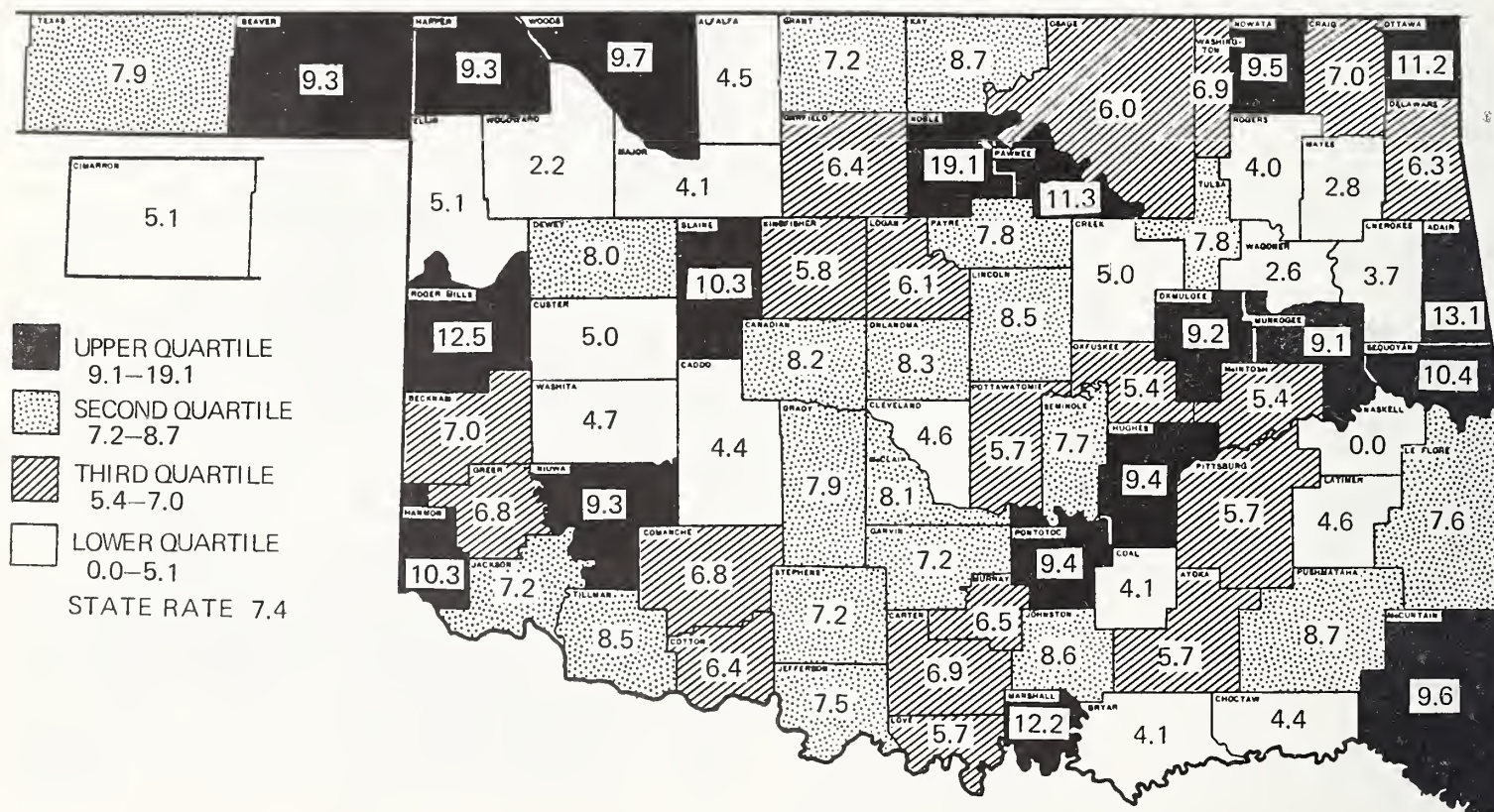


Figure 3. Average Annual Age-Adjusted Death Rates of Cancer of the Ovary, Fallopian Tube and Broad Ligament by County, Oklahoma, 1956-1965, White Females.



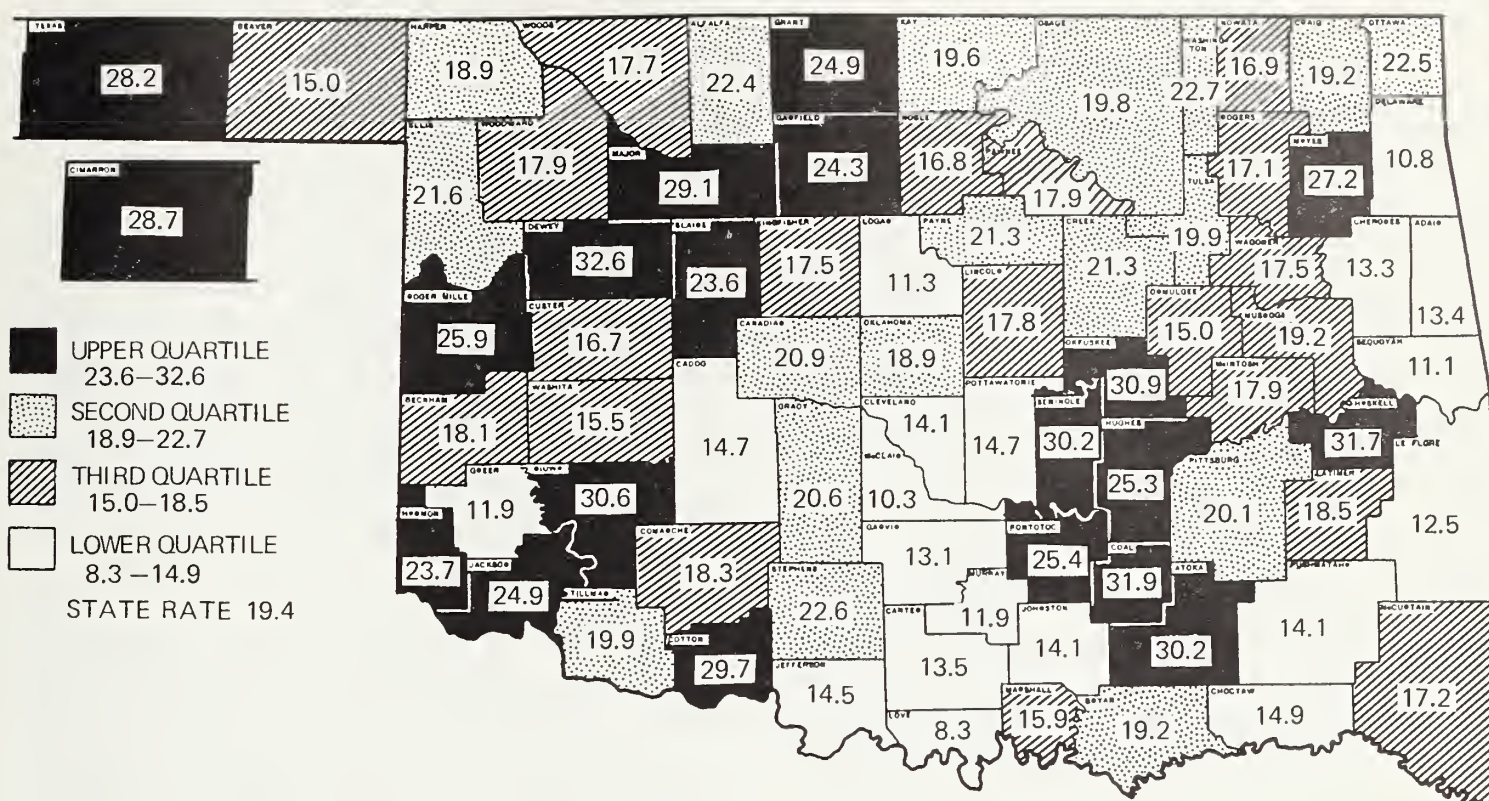


Figure 4. Average Annual Age-Adjusted Death Rates of Cancer of the Prostate by County, Oklahoma, 1956-1965, White Males.

in the analysis of secular changes in adjusted mortality from malignant disease of the reproductive organs. Changes may be due to improvement in diagnosis, the aging of the population at risk, alteration in survival experience of patients due to improved therapy, changes in the classification of the cause of death, or a true change in the incidence of the disease. Thus, the changes in secular trends reported for any specific site may be the net result of the above factors.<sup>17</sup>

It has been suggested that improvement in diagnosis and treatment is the most probable reason for changes in secular trends; however, this factor is very difficult to assess within the framework of this study. The reported decrease in mortality from cancer of the cervix uteri (ISC 171) and corpus uteri, uterus and other female organs (ISC 172-174, 176) in Oklahoma may be accounted for by the increased recognition and treatment of precancerous lesions that prevent the eventual development of death from this malignant disease. Actually, the decrease from one five-year period to another is substantial and is on the order of 28 percent for the nonwhite and 25 percent for the white female population.

#### Racial Differences

The nonwhite population of Oklahoma re-

ported much higher mortality rates than did the white population from cancer of the cervix uteri (ISC 171), corpus uteri, uterus and other female organs (ISC 172-174, 176) and cancer of the prostate gland (ISC 177). These cancer sites are more directly associated with sexual activity. Cancer of the cervix and prostate gland contribute heavily to deaths from cancer among the nonwhite population of Oklahoma. Actually, they are the leading causes of cancer deaths among the nonwhite males and females. The rates for cancer of the breast and ovary, fallopian tube and broad ligament were identical for both white and nonwhite females. These cancer sites are not directly involved in sexual activity.

It is difficult to interpret the epidemiologic significance of these age-adjusted variations in mortality rates as the nonwhite population of Oklahoma is heterogeneous and constitutes two different racial groups, i.e., the Negro population which predominates in the metropolitan communities and the Indian population which resides mostly in the rural counties. Furthermore, it is reasonable to assume that the availability of diagnostic and therapeutic medical care is not the same for Negroes, Indians and whites in Oklahoma. Racial differences may be determined



Table 6  
Age-Sex-Race Specific Death Rates for Cancer of the  
Prostate (ISC 177)

Age	Oklahoma: 1956-60, 1961-65 Rates Per 100,000 Population			
	White Male		Non-White Male	
	1956-60	1961-65	1956-60	1961-65
<5	0.0	0.9	0.0	0.0
5-14	0.0	0.0	0.0	0.0
15-24	0.0	0.0	0.0	0.0
25-34	0.0	0.0	0.0	0.0
35-44	0.7	0.0	0.0	0.0
45-54	10.0	17.8	9.9	30.0
55-64	76.2	93.4	218.7	237.9
65-74	496.7	474.0	888.8	680.5
75+	1603.5	1501.8	1636.3	2240.0
AADR*	98.1	95.4	137.5	149.9

\*AGE ADJUSTED DEATH RATE Based on the 1960  
State White Males as the Standard Population.

not only by the genetic predispositions of the populations under study, but by personal habits, socioeconomic status, hygienic standards, sexual practices and fertility patterns of the racial groups.

Several investigators have reported higher mortality from carcinoma of the cervix and prostate among the nonwhites and emphasized the possibility that the sexual practices and other personal habits such as hygiene might be responsible for this varia-

tion. For instance, snuff and chewing tobacco have been related to cancer of the cervix and have been reported to be responsible for differences in cervical cancer mortality rates between whites and nonwhites.<sup>24</sup> More Negro women use snuff and chew tobacco than do white women and furthermore the use of chewing tobacco and snuff has declined in recent years as has mortality for cancer of the cervix. Though the relationship between snuff and chewing tobacco and cancer of the genitalia was not explained, the author speculates that ingested tobacco absorbed into the blood stream may contain carcinogen.<sup>24</sup>

### Geographic Variations

In trying to explain the geographic variations in mortality from cancer of the reproductive system by site, we should consider those factors in the human environment or personal habits that vary from one area of the state to another. The socioeconomic status of Oklahoma declines from the northwestern counties to the southeastern counties. It is interesting to note that most of the Oklahoma counties experiencing high mortality from cancer of the cervix were counties located in the eastern half of the state, an area of low socioeconomic status. Furthermore, the majority of these counties are located in an area designated as the low-

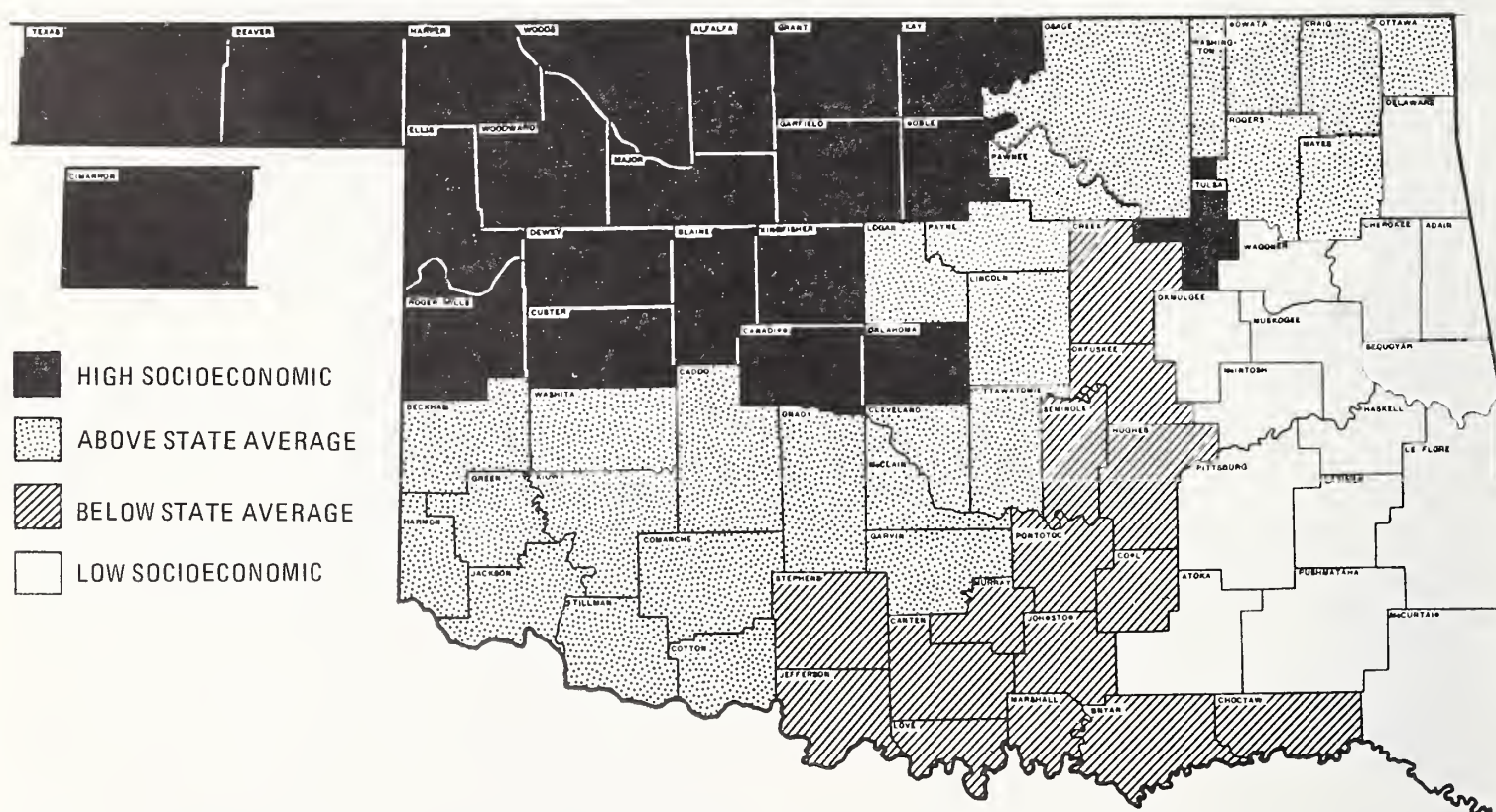


Figure 5. Socioeconomic Distribution of Oklahomans by County, 1950.



Table 7  
Mean Average Annual Age Adjusted Death Rates by Sex of White Population and Degree of Urbanization for Oklahoma Counties, 1956-1965

Cancer Site	Sex	Degree of Urbanization		Rural	Kruskal-Wallis Test	
		Metropolitan	NonMetropolitan		Chi-Square	Value
Breast	Female	21.2	17.5	16.9	15.17***	
Cervix Uteri	Female	8.6	9.0	6.2	17.59***	
Ovary	Female	7.1	6.9	7.0	5.79	
Prostate	Male	18.5	19.9	19.9	5.74	

Chi-Square Values      \*\*\* p <0.001  
                              \*\* p <0.01  
                              \* p <0.05

est socioeconomic area in the state. The Oklahoma experience seems to be consistent with other reports that indicate an increased risk in mortality from carcinoma of the cervix with a decrease in socioeconomic status.<sup>11, 20, 22, 23, 24</sup> It is also apparent that the increase in risk from cancer of the cervix uteri in Oklahoma is influenced by socioeconomic factors and by factors in the urban environment. The mean average annual age-adjusted death rates for the white population vary significantly with the degree of urbanization for cancer of the cervix. The disease is most prevalent in the metropolitan counties and least prevalent in the rural counties. The Oklahoma experience is similar to that reported elsewhere.<sup>3, 12</sup> Since most of the Oklahoma urban counties are located in the eastern half of the state, a combination of urban residency and low socioeconomic status may have contributed to the higher prevalence of the disease in this area.

The geographic variations from cancer of the breast mortality in Oklahoma are not as obvious as those of cancer of the cervix. However the urban-rural differences are significant (<0.001) indicating an increase of cancer of the breast mortality with degree of urbanization. Also, more of the upper quartile counties are located in the upper socioeconomic northwest counties. These counties are also rural. Other upper quartile counties are located in lesser socioeconomic areas that are urban. The influence of the urban environment on the geographic distribution of cancer of the breast may have been diminished by the low socioeconomic environment. This may be the case in the eastern half of the state. On the other hand, the slight increase in breast cancer mortal-

ity in the northwestern counties may have been due to the influence of the high socioeconomic status of the area. This increase in prevalence might have been more obvious had the area not been a rural one.

Cancer of the ovary appears to be distributed in a random fashion. Cancer of the prostate gland seems to be more prevalent in the northwestern upper socioeconomic counties of the state. Contrary to other reports, no significant urban-rural differences were observed in Oklahoma.

## CONCLUSIONS

It appears that the geographic and secular trends of cancers of the reproductive organs in Oklahoma vary with the specific site and can be related to the urban-rural environment and the socioeconomic status.

Higher mortality from cancer of the cervix in the eastern counties appears to be influenced by the increase in urbanization and a decrease in socioeconomic status in that area. Differences in socioeconomic status and sexual patterns between the whites and nonwhites probably have influenced the mortality differential between the two groups. The increased recognition and treatment of precancerous lesions may explain the decrease in mortality from cervical cancer during the period of the study.

The increased mortality from cancer of the breast in the northwestern counties may have been influenced by the higher socioeconomic conditions there. No racial differences or secular trends have been observed for cancer of the breast.

Mortality from cancer of the ovary indicates a random geographic distribution, a



stable secular trend, and a similar rate for whites and nonwhites.

Higher mortality from prostate cancer in the northwestern counties and among the nonwhites may have been influenced to some degree by sexual practices and socioeconomic status.

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# Therapeutic Studies of D-Penicillamine in the Treatment of Rheumatoid Arthritis

RICHARD W. PAYNE, M.D.  
CHARLES L. CAHILL, Ph.D.

*D-Penicillamine can induce objective and subjective improvement in patients with severe rheumatoid arthritis though side effects limit its usefulness in this disease.*

**T**HERAPEUTIC USE of penicillamine in man was initially reported by Walshe<sup>1</sup> who applied its potent copper chelating property to the treatment of Wilson's Disease. Active sulfhydryl donor activity of penicillamine has been borne out clinically by its striking deaggregation of serum macroglobulins in Waldenstrom's Macroglobulinemia<sup>2</sup> and by the marked increase of serum sulfhydryl content provoked by the drug.<sup>3</sup> Penicillamine has further been shown to solubilize collagen in the human being.<sup>4</sup> Jaffe has demonstrated effective reduction of rheumatoid factor titer in the sera of rheumatoid patients treated with the drug accompanied by clinical improvement of the disease.<sup>5</sup> Renal toxicity to racemic penicillamine has been attributed to the L isomer<sup>6</sup> which also exerts greater pyridoxine antagonism than the D isomer.<sup>5</sup> The present study describes our experience with the use of D-penicillamine in the treatment of rheumatoid arthritis.

## METHODS

Fourteen adult patients followed in the arthritis clinic of University Hospital and in private practice were treated with orally administered D-penicillamine (Sulredox®, Squibb). These patients exhibited active rheumatoid arthritis of moderately severe to severe degree and were chosen for the study on the basis of poor response to conventional methods of treatment. These patients were hospitalized prior to D-penicillamine therapy for baseline studies and for close observation during the first week of treatment. Thereafter, they were seen as out-patients at weekly intervals for one month, then at monthly intervals. This study was begun March 1, 1966.

Hematologic factors which were followed included: hemoglobin, hematocrit, white blood count with differential (WBC), platelet count, erythrocyte sedimentation rate (ESR) and rheumatoid factor (RF). Chemical parameters studied by laboratory analysis were: blood urea nitrogen (BUN); serum transaminase (S-GOT); alkaline phosphatase; total serum protein, and glycoprotein.<sup>7</sup> Urinalysis was performed at each clinic visit. Protein electrophoresis studies were conducted using the Beckman Spinco cellulose acetate method as described by the manufacturers. Sedimentation velocity experiments were conducted in a Spinco Model E analytical ultracentrifuge equipped with an RTIC temperature-control system and a phase plate as a schlieren diaphragm. A



regular cell with an optical path of 12 mm was employed at a rotor speed of 52,640 rpm and 20°. Apparent sedimentation coefficients were determined according to the procedure of Fujita<sup>8</sup> and the area under each schlieren boundary was evaluated by planimetry.

Clinical assessment of patients was summarized as: Grade 1, complete remission; Grade 2, major response; Grade 3, minor response, and Grade 4, no improvement or exacerbation. Body weight, blood pressure, pulse rate, and bilateral grip strength, using the Jamar Dynamometer, were recorded during each clinic visit.

Daily dosage of D-penicillamine was 1.5 grams given orally in divided doses (T.I.D.). Reduction of dosage was attempted in two patients who showed intolerance, but both had to discontinue the drug. Surbex-T (Abbott) was given at the rate of one tablet daily as a source of pyridoxine during treatment.

#### RESULTS

Experience gained in the present use of D-penicillamine for the treatment of rheumatoid arthritis is summarized in the following tables. Clinical improvement of those patients able to tolerate the drug was clearly evident. As shown in table 1, the seven patients who could tolerate a daily dose of 1.5 grams for three months or longer exhibited Grade 1 or 2 clinical response.

Confirmatory laboratory evidence of these remissions included increases in hemoglobin and hematocrit accompanied by decrease in ESR. These data are also included in table 1. These patients also exhibited marked decreases in serum glycoprotein and glycoprotein to protein ratio (PR) as shown in table 2. The remaining patients showed varying degrees of response to the medication. The 14 patients were graded in total response to D-penicillamine as follows: Grade 1, 1; Grade 2, 8; Grade 3, 2; and Grade 4, 4.

All patients able to tolerate the drug for at least one month showed objective evidence of improvement largely manifested by a decrease in serum glycoprotein content and in PR as seen in table 2. The changes in ESR,

hemoglobin and hematocrit, shown in table 1, were slightly more delayed. One patient (H.C.) was able to take the drug for only 15 days and exhibited a slight rise in hemoglobin and hematocrit, but, as shown in table 2, exhibited a marked decrease in serum glycoprotein content. Considering all 14 patients, a significant rise in hemoglobin occurred in eight with a similar rise of hematocrit in six (table 1). Total serum protein was seen to increase in four patients, serum glycoprotein decreased in ten, and PR fell in 11 (table 2). The RF became negative in four patients during treatment. No change in platelet count was noted in any of the patients.

The drug was discontinued in 12 patients because of side effects which were considered too hazardous to continue such treatment or were unduly disagreeable to the patient. The side effects attributable to D-penicillamine cleared promptly in all but two of these patients. These two developed marked albuminuria, one persisting for four months and the other for eight months. Electrophoretic analysis showed the proteinuria in one patient (N.R.) to consist of 75.8 percent albumin, 18.7 percent alpha globulin, and 5.5 percent beta globulin; and the other patient (C.S.) to be only albumin. Ultracentrifugal analysis showed the proteinuria of N.R. to contain two components, one of 3.06 S (60.7 percent) and the other of 7.84 S (39.3 percent). The proteinuria of C.S. was

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Table 1  
Effect of D-Penicillamine on Hemogram, Erythrocyte Sedimentation Rate,  
Rheumatoid Factor and Clinical Response in Patients With Rheumatoid Arthritis\*

	Dur Rx	WBC(E)		Hb (Hct)		ESR		RF		Clinical Response
		B	A	B	A	B	A	B	A	
J.P. W/M/58	5 Mo.	7,000(1)	6,300(3)	16 (49)	15.2 (45)	32	20	+	+	Gr. 1
A.R. N/F/62	3 Wks.	5,600	4,900	9 (35)	9.5 (36)	64	64	+	+	Gr. 4
F.R. M/W/58	42 Da.	10,200	11,600	11.4 (36)	14.6 (43)	47	47	+	—	Gr. 3
M.S. W/F/39	22 Da.	10,400(3)	9,700(3)	13.6 (40)	12.9 (34)	50	47	+	+	Gr. 4
H.C. W/M/65	15 Da.	9,200(0)	9,000(3)	12.6 (36)	13.6 (39)	44	50	+	+	Gr. 3
I.H. W/F/40	27 Da.	11,400(0)	3,650(2)	12 (38)	10.0 (33)	44	34	+	+	Gr. 2
J.G. W/F/45	4 Mo.	6,200(1)	7,000(0)	12.0 (40)	15.4 (49)	44	9	+	—	Gr. 1
C.C. W/F/48	35 Da.	10,600(3)	12,300(2)	13.2 (42)	15.6 (49)	54	41	+	+	Gr. 2
C.S. W/M/51	4 Mo.	10,500(0)	10,500(0)	10.8 (35)	13.8 (45)	52	39	+	+	Gr. 2
L.B. W/F/46	4 Mo.	9,000(0)	12,200(0)	9.9 (37)	12.8 (39)	55	48	+	+	Gr. 2
J.C. W/M/61	3 Mo.	7,500(1)	8,200(5)	11.4 (40)	15.4 (49)	47	26	+	—	Gr. 2
C.G. W/F/49	4 Mo.	5,800(0)	6,250(1)	12.6 (37)	15 (43)	45	23	+	—	Gr. 2
B.M. W/F/40	7 Da.			13.8 (42)	13.4 (42)	37	43	+	+	Gr. 4
N.R. W/F/26	5 Mo.	6,480	6,750	10.2 (32)	15.8 (43)	51	13	+	—	Gr. 2

\*An additional patient (B.W.) was discontinued at 13 days due to skin rash.  
(B) is before treatment and (A) is after treatment.

seen to contain only one sedimenting component of 4.59 S. Bence-Jones protein was not found in either of these patients.

The urinary protein in both patients was excreted at the rate of 10-15 grams daily for two months following cessation of D-penicillamine treatment, then gradually subsided. The patients were hospitalized on several occasions for a thorough study of kidney function, but no other renal pathology was found. One patient declined renal biopsy, and the

other, after an unsuccessful biopsy, refused further attempts.

The data resulting from ultracentrifuge studies are given in table 3. There were no significant differences in the sedimentation coefficients calculated for each schlieren boundary, and during the course of this study each serum was seen to contain the usual 4S, 7S, and 17S components. In addition, three of the sera contained a 10S component. The data in table 3 show that in 11 instances the 7S component decreased in concentration during treatment with the drug. This decrease was, in general, followed by increases in the 4S and 17S components.

The data in table 4 resulting from electrophoresis experiments are, in general, consistent with the ultracentrifuge findings. These data show a trend toward decrease in the globulin fractions and increase in the albumin fraction. The serum protein electrophoretic changes, however, were not of great magnitude.

Leukopenia occurred early in one of the patients and corrected rapidly on stopping the drug. Eosinophilia appeared during the course of treatment in most of the patients, but generally diminished with further treatment. No other changes in the leukocytes were noted. No abnormalities of BUN, S-GOT, or alkaline phosphatase were induced by D-penicillamine in this series of patients.

Table 2  
Protein and Glycoprotein Content in Sera of Patients  
Treated With D-Penicillamine

Patient	Protein gm%		Glycoprotein mg%		P.R.*	
	B	A	B	A	B	A
J.P.	6.90	6.55	195	144	2.83	2.19
A.R.	8.26	9.29	333	245	4.03	2.86
F.R.	7.25	7.51	244	212	3.37	2.82
M.S.	7.33	6.85	173	168	2.36	2.45
H.C.	6.55	6.72	181	153	2.76	2.50
I.H.	6.01	7.71	168	119	2.80	1.54
J.G.	7.44	7.59	247	173	3.32	2.27
C.C.	5.83	7.62	178	153	3.05	2.01
C.S.	6.70	6.14	239	178	3.57	2.90
L.B.	7.50	6.68	256	188	3.41	2.81
J.C.	8.47	7.72	204	190	2.41	2.46
C.G.	7.03	7.52	189	160	2.69	2.13
B.M.	7.37	7.15	206	192	2.80	2.69
N.R.	6.48	5.81	199	150	3.07	2.57

\*P.R. = Serum Glycoprotein g%/Serum protein g%  
× 100  
(B) is before treatment and (A) is after treatment



Table 3  
Ultracentrifugal Components in Sera of Patients  
Treated With D-Penicillamine\*

Patient	4S		7S		10S		17S	
	B	A	B	A	B	A	B	A
J.P.	67.6	80.0	31.4	16.1	—	—	1.0	3.9
A.R.	53.9	68.3	45.9	29.5	—	—	0.1	2.2
F.R.	71.1	74.0	26.7	22.2	—	—	2.2	3.8
M.S.	77.5	76.7	19.6	20.2	—	—	2.9	3.1
H.C.	81.7	67.4	15.3	29.1	—	—	3.0	3.5
I.H.	75.9	76.8	23.1	19.7	—	—	1.5	3.5
J.G.	68.3	80.8	27.7	14.1	1.0	0.0	3.0	5.1
C.C.	83.2	69.3	13.7	24.3	—	—	3.1	5.4
C.S.	73.0	79.4	20.0	11.0	5.0	5.0	2.0	5.0
L.B.	71.9	75.6	23.9	19.3	1.0	3.0	4.2	2.1
J.C.	58.6	66.7	38.7	32.8	—	—	2.7	.5
C.G.	71.2	74.1	24.5	21.1	—	—	4.3	4.8
B.M.	43.5	46.3	55.5	52.1	—	—	1.0	1.6
N.R.	74.0	84.3	21.9	12.9	—	—	4.1	2.8

\*Values are expressed as %. (B) is before treatment and (A) is after treatment.

Five patients developed nausea on D-penicillamine necessitating stopping the drug. One patient described urinary frequency and another urinary retention during treatment. An erythematous dermatitis occurred in one patient after 22 days of treatment and another described loss of taste persisting for one week after stopping the drug. All side effects except albuminuria disappeared soon after discontinuing the drug.

Once substantial remission was induced by D-penicillamine; persistence of this happy

condition continued for approximately three months after stopping the agent, then gradually subsided to the original state of the disease over the next one to three months.

## DISCUSSION

Reduction of R.F. and E.S.R. in patients with rheumatoid arthritis treated with 2.0 grams of D-penicillamine daily for periods of four to six months has been reported by Jaffe.<sup>5</sup> He also observed clinical improvement in these 21 patients and described side effects of anorexia, nausea and vomiting (25 percent), eosinophilia commonly and neutropenia occasionally; skin rash, drug fever and temporary nephrotic syndrome manifested by transient albuminuria were also observed, all of which subsided on discontinuing the drug.

Zuckner, *et al.*, have described their experience with D-penicillamine given in daily doses of one to two grams to 15 patients with rheumatoid arthritis for periods of one year.<sup>9</sup> Nine of their patients exhibited clinical improvement attributable to the drug; laboratory evidence of improvement also occurred, including decrease in E.S.R., R.F., and ceruloplasmin. Inconsistent changes in immunoglobulins as determined by immunodiffusion techniques were observed, though the trend was toward a decrease in gamma M and gamma G levels. Proteinuria persisting four months after stopping the drug occurred in one patient.

Table 4  
Electrophoretic Components in Sera of Patients Treated With D-Penicillamine\*

Patient	ALB		$\alpha - 1$		$\alpha - 2$		$\beta - 1$		$\beta - 2$		$\gamma$	
	B	A	B	A	B	A	B	A	B	A	B	A
J.P.	45.6	48.2	5.6	5.8	14.4	10.5	15.0	17.5	—	—	19.4	18.0
A.R.	35.5	38.3	4.7	5.0	13.6	12.2	31.4	27.8	—	—	14.8	16.7
F.R.	40.8	50.0	6.9	4.5	17.5	14.0	13.9	12.5	—	—	20.9	19.0
M.S.	51.3	52.8	4.2	4.4	11.6	11.1	12.2	11.1	6.9	6.8	13.8	13.8
H.C.	54.5	48.8	4.5	4.9	11.4	12.2	9.9	11.6	6.8	6.0	12.9	16.5
I.H.	42.5	45.8	7.5	5.6	12.3	11.3	8.2	9.9	6.9	7.8	22.6	19.6
J.G.	42.7	50.1	6.0	4.5	15.6	10.2	12.8	13.4	—	—	16.1	21.8
C.C.	50.0	49.0	6.6	4.6	14.2	11.8	9.4	10.5	5.7	5.9	14.6	18.2
C.S.	42.6	38.7	6.9	6.5	14.9	14.2	13.9	16.8	—	—	21.7	23.8
L.B.	44.5	48.8	6.5	5.6	12.9	10.6	12.9	12.5	7.1	—	16.1	22.5
J.C.	39.6	42.4	4.7	4.9	9.9	12.5	11.3	11.4	—	—	34.5	28.8
C.G.	47.1	47.2	5.7	6.1	13.4	11.1	13.4	13.9	5.1	—	15.3	21.7
B.M.	39.9	38.7	5.4	6.6	14.3	14.9	14.3	13.6	—	—	26.1	26.2
N.R.	45.2	45.3	6.7	6.1	14.1	13.7	13.3	12.5	5.9	—	14.8	22.4

\*Values are expressed as %. (B) is before treatment and (A) is after treatment.



Beneficial effects of D-penicillamine in rheumatoid lung disease has been reported by Lorber, who found dissolution of pulmonary infiltrates with increase in serum protein sulfhydryl content during treatment.<sup>3</sup>

The series of patients here presented confirm these observations both from the standpoint of clinical improvement and change in laboratory parameters. Substantial reduction of serum glycoprotein is provoked by the drug generally paralleling clinical improvement. Ultracentrifugal studies indicate that the 7S serum component decreases during the course of treatment. The observed decrease in the 7S component is accompanied by increases in the 4S and 17S components. These data suggest that D-penicillamine does not effect in vivo deaggregation of serum macroglobulins and are in agreement with the findings reported by Block, *et al.*,<sup>2</sup> Costanzi, *et al.*,<sup>11</sup> and Jaffe, *et al.*<sup>12</sup>

Toxicity encountered in our study was also in accord with previously reported experiences with penicillamine in the rheumatoid individual. With the exception of albuminuria, side effects including upper gastrointestinal, hematologic, and dermatologic subsided promptly on discontinuing the drug. However, two patients developed profuse albuminuria persisting for four and eight months after stopping the drug. No other evidence of renal involvement has been evident in these patients to the present time, one year post-treatment.

It is of interest that Miehle and Kohlarth treated ten patients with 0.9-1.5 grams D-penicillamine for periods of four to 14 weeks without side effects.<sup>10</sup> The hope of Sternlieb that the nephrotic syndrome is provoked only by the L form of penicillamine seems untenable on the basis of our experience.<sup>6</sup> There remains the possibility that smaller doses of D-penicillamine, perhaps given in intermittent dosage, will prove more acceptable to the therapy of rheumatoid arthritis.

Thus, penicillamine, while exerting beneficial effects in the treatment of rheumatoid arthritis, is attended by side effects of potential seriousness. Changes produced by the drug in this disease are undoubtedly of great interest and certainly will have a bearing on further efforts toward the understanding and treatment of this disease.

D-penicillamine in daily oral doses of 1.5 grams was used in the treatment of 14 patients suffering from rheumatoid arthritis. Those patients tolerating the drug for three months (seven) showed good to excellent clinical improvement confirmed by increasing hemoglobin and hematocrit and decreasing erythrocyte sedimentation rate, serum glycoprotein and rheumatoid factor. A decrease in the ultracentrifugal 7S component and decrease in globulin fractions determined by serum protein electrophoreses was also attributed to the drug. Patients treated for shorter periods of time showed similar but less striking responses. Side effects of leukopenia, nausea, dermatitis, and loss of taste cleared rapidly on stopping the drug. Albuminuria was provoked by the drug in two patients, and persisted for four to eight months.

#### ACKNOWLEDGEMENT

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## Tumor Clinic Proceedings

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### CASE No. 17: Cavernous Lymphangioma of the Tongue in an Eight-Year-Old Girl

**PRESENTATION:** The patient is an eight-year-old white female from Haskell, Oklahoma, who was seen for the first time

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

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at nine months of age at Bakersfield, California. At that time she had a lesion under the anterior portion of the tongue on the right. This was diagnosed as a cavernous hemangioma, and she was followed there without treatment for about two years, at three month intervals. At the age of two years she moved to Oklahoma and was seen at Children's Hospital. She was admitted for a diagnostic work-up. Again the diagnosis was cavernous hemangioma. The lesion at that time was described as a 0.5 to 0.75 cm lesion under the right aspect of the tongue anteriorly. She was asymptomatic with no difficulty with speech or mastication. From that time until the present, which is about six years, she has been followed as an out-patient. Approximately three months ago she was seen and a picture was taken of the lesion. At that time it was about a two by one cm lesion in the anterior lateral aspect of the tongue. Her mother and teacher reported a history of the patient's picking at this lesion to the point of bleeding, either with her fingers or with her teeth. She had several little projections leading from this hemangioma, which she would pick off and consequently would have bleeding from them. She had no trouble at that time with either mastication or speech. According to the mother the lesion had not increased significantly in size over the previous several



years. The patient was seen again last week, at which time the mother brought her in because she was having difficulty with her speech. She is having slurred speech now. The lesion has increased about two times in volume since her previous visit, and it now involves the dorsum of the tongue on the right. It has apparently invaded through the tongue, involving the inferior aspect of the tongue and the floor of the mouth laterally. The lesion is friable with many small papilliform projections which do bleed on occasion. She now has trouble eating and is having more psychological difficulty because she senses this is present and feels as though other people might be observing this. When you walk up to her she immediately opens her mouth and puts her tongue up without you having said anything to her. She has received no treatment at any time.

DOCTOR BOGARDUS: Doctor Snow, what do you think we should do at this point?

DOCTOR SNOW: Was this lesion biopsied two months ago?

DOCTOR BOGARDUS: This was biopsied some time in the past, but I am not certain when.

PRESENTER: It was biopsied in California and here at Children's Hospital about six years ago, but since then I do not think that it has been re-biopsied.

DOCTOR BOGARDUS: It was biopsied when the patient was two years old and the diagnosis was lymphangioma of the floor of the mouth.

DOCTOR SNOW: It looks more like a lymphangioma than a hemangioma. A lot of those spaces appear to be filled with clear fluid rather than blood.

DOCTOR BOGARDUS: At that time clinically it was called a hemangioma.

DOCTOR SNOW: It may be that one turns into the other. You say that this has doubled in size in the three months that you have been observing it?

DOCTOR BOGARDUS: It has grown much more rapidly recently. It appears bigger and I certainly feel that it might be worthwhile to re-biopsy it.

DOCTOR SNOW: Have you considered her for radiation therapy?

DOCTOR BOGARDUS: Yes, this was another reason why we brought her today, to

see what your feelings would be on this particular form of treatment. If this is either a lymphangioma or hemangioma, it will more than likely respond to radiation therapy and probably can be arrested. The only problem is that whenever you treat a patient with radiation at this age she has another 60 or 70 years to live, and problems can arise much later. Whenever we have to irradiate children, we can see problems in later life, and we would just as soon not do it until we absolutely have to.

DOCTOR SNOW: I think that this patient should be treated surgically in a very conservative way. I think that the tip of the tongue can be spared and everything else that is involved grossly with the tumor could be removed, and functionally she would not be in too bad a situation as far as speaking and swallowing. There is a chance that one will not get around it in an attempt to save the parts of the tongue that are most important functionally. And too, one may remove the bulk of the tumor and then it may begin to grow, and one would still be in the same situation. I think this is a very difficult problem. I don't think there is any question that she should be treated either one way or another. It is dangerous at this point just to observe her with this rapid growth. I do think that the lesion ought to be biopsied again, although this is probably a benign process. Why it has begun to grow suddenly is puzzling. I think that it is possible to remove this very conservatively surgically, and the problem may be eliminated at least for the time being.

PRESENTER: Looking back, if you saw a patient like this earlier, would you recommend an excision or observation?

DOCTOR SNOW: We ordinarily just recommend observation for small hemangiomas of the mouth in children. I think that we should have this biopsied and then discuss the case again.

DOCTOR BOGARDUS: This could be very easily done and bring her back next week.

DOCTOR SNOW: I take it that you have a considerable amount of reservation about treating her with radiation therapy?

DOCTOR BOGARDUS: If it is possible for someone to get around this adequately by another means, then it is preferable. On



## *Tumor Clinic* / BOTTOMLEY

the other hand, if you can't get around it by surgery and she loses half of her tongue and part of the floor of her mouth, and we still have to treat her, then we are much worse off than if we had treated her originally. I think that what we need to do is re-biopsy.

**FINAL DIAGNOSIS:** Either hemangioma or lymphangioma of the floor of the mouth.

**TUMOR CLINIC RECOMMENDATION:** It was recommended that the lesion be re-biopsied. This was carried out and the pathological report was lymphangioma of the floor of the mouth. The patient was re-discussed and it was elected to excise the lesion surgically.

**CASE No. 18: Squamous Cell Carcinoma of the Tongue**

**PRESENTATION:** The patient is a 63-year-old white male farmer who has had a lesion on the right side of his tongue for approximately one year. This has gradually enlarged and for the last two or three months it has become increasingly painful. He has also had some difficulty in swallowing and has changed his diet from solid to soft foods. In the past two or three months he has noticed a gradually enlarging nodule in the right side of the neck which in the last few weeks has become mildly tender and seems to be enlarging fairly rapidly at this time. He is a chronic smoker and has chronic bronchitis. He also has restrictive and obstructive pulmonary disease. He has a positive tuberculin skin test and old bilateral apical pulmonary infiltrates. On examination he has a rather large three by three cm lesion on the lateral aspect of the anterior portion of the tongue that does not involve the gingiva or mandible. It extends posteriorly to at least the mid-tongue and there is some question about thickening along the posterior pharynx on the right side. He has a palpable cervical lymph node on the right measuring about three by three cm, which is attached to the carotid vessels. He also has patches of leukoplakia in his mouth. He has no other palpable lymph nodes in his neck or in the submental area. We thought surgical excision of this lesion was required and maybe a 90 percent glossectomy. He was seen by Radiation Therapy in consultation. I will let them report on what their

findings were. Biopsy of the lesion was reported as showing a squamous cell carcinoma.

**DOCTOR CONDIT:** Doctor Williams, will you describe what you felt on palpation and discuss how to manage this patient?

**DOCTOR WILLIAMS:** The lesion includes the right side of the tongue, probably at the junction of the posterior medial third anteriorly, all the way to the midline but in the anterior third of the tongue it crosses the midline and involves the whole tip of the tongue. There is a node in the right side of the neck. After palpation, I do not think that the lesion extends into the floor of the mouth, but I could not evaluate the pharynx very well.

Doctor Snow, what do you think?

**DOCTOR SNOW:** I did not palpate it, but I do not believe that the tumor involves the pharynx.

**DOCTOR WILLIAMS:** In general, we are reluctant to excise this much tongue; however, the lesion is further anterior than usual, and I think some tongue mobility could be preserved on the left side. I think the choice would lie between an initial surgical attack, meaning excision of the right half of the tongue and the left anterior third with in-continuity neck dissection. Another possibility would be to treat the tongue with radiation therapy and do a neck dissection. I would be a little swayed in my selection between the two modalities by what the radiologists thought. Before anything is done he ought to have the remaining teeth extracted.

**DOCTOR CONDIT:** Doctor Hughes, don't you think that his blood type should be a pertinent feature also?

**DOCTOR HUGHES:** He is AB negative. I think that we could get enough blood.

**DOCTOR CONDIT:** Doctor Bogardus?

**DOCTOR BOGARDUS:** I think that a man with a lesion such as this could very well benefit by being treated primarily with radiation therapy. The tongue lesion is not as large as many that we have treated, and I think we stand a very reasonable chance of curing the primary tongue lesion, especially if we carry treatment to a high dosage. Very often the treatment is equally effective on the neck but if not, then the neck can be operated following radiation



therapy. If the tongue lesion does not completely disappear or recurs, then this can still be operated later. I would be in favor of treating him initially with radiation therapy and then following this with surgery if necessary.

DOCTOR CONDIT: When you say a high dose, how much?

DOCTOR BOGARDUS: I mean 8,000 rads to the tumor-bearing area.

DOCTOR CONDIT: I see. Doctor Snow?

DOCTOR SNOW: Well, I can certainly see both points of view, but I prefer primary surgery in this particular case.

DOCTOR CONDIT: What sort of a functional result are you going to have after an operation of this magnitude?

DOCTOR SNOW: I don't think that he would have any effective tongue left as far as speech is concerned, but I think that he would have an effective tongue as far as swallowing is concerned.

DOCTOR CONDIT: He would be able to swallow but he would not be able to talk.

DOCTOR SNOW: That's right. I don't think that he would have any effective lingual articulation of speech.

DOCTOR CONDIT: Any other thoughts or comments? Doctor Hughes?

DOCTOR HUGHES: If his tongue was treated with radiation therapy, I am concerned about the rapid enlargement of the neck node during the period he would be

without anything more than radiation.

DOCTOR BOGARDUS: This is no problem as he would be treated for the neck nodes simultaneously with the primary lesion.

DOCTOR WILLIAMS: But, we still have a bit of a difference of opinion. I still think that we ought to have a neck dissection.

DOCTOR BOGARDUS: Yes, I think that it should be done because we will not carry the neck treatment to that high a dose.

DOCTOR CONDIT: In cases where there is a difference of opinion, the ultimate decision is left to the managing service.

DOCTOR WILLIAMS: I think that this case illustrates a change in thinking: In the past we ordinarily thought that it was better to operate first and then irradiate, and now it is the other way around. The more effective treatment is to irradiate first and then operate.

*FINAL DIAGNOSIS:* Squamous cell carcinoma of the tongue with metastases to the cervical nodes.

*TUMOR CLINIC RECOMMENDATIONS:* The patient is to receive radiation therapy to a dose of 8,000 rads to his primary tumor. Following his radiation therapy the patient will have a right radical neck dissection. If the primary lesion does not respond to radiation therapy or recurs following radiation therapy, the lesion will be surgically removed. □

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Seattle, Washington

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## OSMA Combats National Malpractice Trend

Malpractice, according to the dictionary, is "a dereliction from professional duty or a failure of professional skill that results in injury, loss, or damage." To an accused physician it is a traumatic and often financially disastrous experience.

Medical malpractice liability has become a serious occupational hazard in the practice of medicine. Unfortunately, the prospect is that the problem will become more acute. Since World War II the number of malpractice suits against physicians has risen annually. A corresponding increase in professional liability insurance rates has been necessary to cover the increase in losses. Rates have risen at more than three times the cost of living.

In a report to its House of Delegates, the AMA Board of Trustees stated, "In 1967, average (professional liability) rate increases of 10 to 20 percent were made by the insurance rating board in 35 states, and in 1968, rates were increased from 10 to 50 percent in 20 states. Nevertheless, information available to the Law Division of the AMA indicates that the insurance industry as a whole sustained underwriting losses on this business in every year beginning with 1959."

A recent news story stated that liability rates in California nearly doubled on October 1st, forcing some physicians to pay from \$5,000 to \$12,000 in premiums. This report was somewhat exaggerated, according to the California Medical Association. For \$100,000 coverage, Class I physicians are paying \$897, and Class V surgeons are paying \$3,450. Those with loss experience are indeed paying the rates quoted in the news story.

Malpractice loss experiences in some states actually forced insurance companies to quit writing coverage. Before some remedial legislation was

passed, physicians in Alaska were hard pressed to find any company willing to accept the risk. They were forced to go to the large underwriting groups, such as Lloyds of London, for their liability coverage.

Considering the nationwide trend, Oklahoma's professional liability situation is very good. Just a few years ago Oklahoma physicians were paying the sixth highest rate for professional liability coverage. Today the average rate is approximately 39th in the United States and has been dropping steadily in relationship to rates of other state plans.

A part of Oklahoma's seemingly good fortune was brought on in 1966 when the OSMA Council on Insurance conducted an extensive search for an insurance company writing professional liability coverage that could be sponsored by the association. In December of that year the OSMA House of Delegates endorsed coverage being written by the Insurance Company of North America through its wholly owned subsidiary, the Pacific Employers Indemnity Company.

In return for this endorsement, INA entered into a contractual agreement with the association for mutual cooperation and exchange of information. A portion of the contract set out plans for a malpractice prevention program.

The first part of this program was the production of a printed brochure on malpractice prevention. The brochure was introduced to the OSMA membership for the first time in May at the Tulsa annual meeting. Entitled "Professional Liability Medical-Legal Guide for Physicians," the publication will be made available to all physicians in the state.

The second part of the program calls for a team of speakers to travel to county medical societies and present a program on prevention. The team will include a lawyer and phy-

sician. The brochure will be a workbook for such meetings.

County medical society presidents are being contacted and program time is being requested.

It is the intention of the OSMA Council on Insurance to place the brochure in the hands of every physician in the state. However, there will be some delay before this can be accomplished. One extremely important portion of the book is entitled "Malpractice Prophylaxis." It contains a series of 28 "rules of thumb" that will greatly reduce the physician's chances of becoming involved in a malpractice action if he follows them. Many of them are obvious, others are unfamiliar, but they are all practical.

### Malpractice Prophylaxis

1. The physician should care for every patient with scrupulous attention to the requirements of good medical practice.

2. The physician must know his legal duty to the patient.

3. Destructive and uninformed criticism of the work of other physicians must be avoided. Such criticism has directly led to many unwarranted malpractice actions.

4. "Ideal" medical records should be kept in every case:

- (a) records that would be acceptable when offered in court,
- (b) records that clearly show what was done and when it was done,
- (c) records which establish that nothing was neglected and the given care fully met an acceptable standard.

If any patient discontinues treatment before he should or if he fails to follow instructions, the record should show that fact. A good method is to file a carbon copy of the letter sent the patient advising him against the unwise course.

5. The physician should be careful to avoid making any statement constituting, or which might be construed as, an "admission" of fault on his part. Such an "admission" may be damaging to the defendant physician even though it has been made to a third party, rather than to the patient, and even though it



was made before the trial. Such an "admission" may also be made by an agent or employee of the physician during the course, and within the scope of his employment.

6. The physician should exercise tact, as well as professional ability, in handling his patients. A proper professional manner should be maintained at all times, both toward the patient and toward the patient's family. The attentive physician may early sense some unsatisfactory and disturbing undercurrent which, by the institution of protective measures, may be prevented from developing into something much more unpleasant. Thus, if the patient is not doing well, consultation may be indicated; if the patient is dissatisfied or complaining, or if the family's attitude indicates dissatisfaction, consultation should be demanded. The use of a consultant affords, in any case, great protection against a claim or suit.

7. The physician should refrain from over-optimistic prognoses.

8. The physician should advise his patients of any intended absence from practice and should recommend, or make available, a qualified substitute.

9. The physician should secure an "informed" consent for an operation or for an autopsy.

10. Since the physician may be held responsible for the mistakes of the nurses or other assistants working in his office or clinic, he should exercise great care in their selection and supervision. This same care should be exercised in the delegation of duties to them and under no circumstances should they be permitted to practice medicine in his absence. All injections or medications should be done under his supervision.

11. The physician, in his selection of patients, should limit himself to such fields as are within his qualifications. He should keep abreast of the times. If he confines his practice to his office and does not make house calls, he should advise his patients of this fact before undertaking their care.

12. The physician should keep inviolate all confidential communi-

cations.

13. The physician should frequently check the condition of his equipment and make use of available safety installations.

14. In the treatment of the patient, there must be no experimentation without the explicit and informed consent of the patient; and then only when there is reason to believe that no harm will be done to the patient as a result of the experiment.

15. Be definite about instructions. Be sure the patient understands when medication is to be discontinued, if a further trip to a physician's office is not contemplated. In the instructions to the patient, effects of not discontinuing the medication at the proper time should be given. Moreover, precaution instructions should be given for the protection of those caring for or in contact with the potentially dangerous or suicidal patient.

16. The physician should not fail to utilize every available technique to confirm a diagnosis. If an incorrect diagnosis is attributable to a failure to do so, liability may exist where the incorrect diagnosis is followed by incorrect treatment.

17. The patient must not be abandoned. The physician-patient relationship should be legally and ethically terminated.

18. The physician should never tell a patient, or the patient's attorney, that he carries professional liability insurance. The mere mention of this fact may plant the seed of a lawsuit in the mind of a dissatisfied patient.

19. Immediately upon being advised of the possibility of a malpractice suit, the physician should notify his insurance carrier. He should not write a letter or make any statement with reference to a professional liability claim or suit, except upon the recommendation of the attorney representing his insurance carrier.

20. The physician should arrive at an understanding with the patient in the matter of fees. Misunderstanding in this matter, and particularly when the question of excessive fees arises, constitutes an avoidable element of risk. Tact and diplomacy

are necessary if the patient is dissatisfied with his medical bill. The physician should not press for the collection of his fee, unless he is sure that the patient received proper treatment and has no basis for a malpractice suit.

21. Because of the possibility of error in transmission, the physician should realize that it is dangerous to telephone a prescription or to make it a habit to diagnose and instruct patients as to treatment over the telephone.

22. The sterilization of any patient is extremely hazardous, from a legal standpoint, except when there is medical indication. The performance of this operation should be undertaken by the physician with great reluctance and only after consultation with both the husband and the wife and after they have signed a joint written consent for the operation.

23. No female patient should be examined, except in an actual emergency, unless a third person is present. There is no more serious or destructive charge against a physician than that of undue familiarity.

24. A signed consent form should be required by the physician before undertaking a surgical procedure.

25. It is a commendable practice to have sponge counts during all surgical procedures, but the surgeon is not thereby relieved of liability. He should personally check and double-check to preclude the contingency of a sponge, instrument or other foreign object remaining in the incision through the carelessness of a nurse or other assistant. Even though the careless one is not his employee, the law may impose a duty on him to see to the removal of such objects.

26. Where a patient is unconscious and unidentifiable the physician may do whatever is necessary to preserve health or life. Consent is implied under these circumstances. In all other cases, broad and clear consent, preferably in writing, should be obtained. If the patient is a minor or an incompetent, the consent must be obtained from his legal guardian.

27. In dealing with fractures, x-rays should usually be taken before



and after reduction, following surgical intervention and post-operatively during healing to check position and progress. Failure to use sufficient x-rays in this enlightened day and age can create tremendous difficulties in defending a malpractice case.

28. Before venturing to diagnose mental disease (and to put that diagnosis in writing), which may be the basis of an action to incarcerate the patient, the doctor should usually insist that the patient be brought to his office, or the doctor should go to the patient, so that a complete examination may be made. □

## Business of Medicine Seminar Topic

Two OSMA committees joined forces to plan a seminar on the business aspects of medical practice for medical students, interns and residents. The Public Relations Committee, chaired by James B. Eskridge, III, M.D., and the Medical School Liaison Committee, chaired by C. Riley Strong, M.D., are cooperating with the SAMA Chapter at the OU Medical School to plan the two-day function.

Scheduled for two consecutive Sundays, November 2nd and 9th, the seminar will be held in Goddard Auditorium, Oklahoma Medical Research Foundation building.

According to the two chairmen, purpose of the seminar is to give junior and senior medical students, interns and residents, basic business information necessary to the setting up of a practice. In addition, it will convey information on personal business affairs and government medical programs.

Two Oklahoma clinic administrators have agreed to present talks on starting a practice. Mr. Jim Loy, Administrator of the Chickasha Clinic will cover the various types of practices, operational efficiency, purchase of supplies, hospital privileges and relations, and what to expect from detail men.

Tom Emel, Administrator of the Oklahoma City Clinic, will talk on hiring of personnel, leasing and buy-

ing equipment, billing and collection systems and the creation of medical and business records systems.

A portion of the two-day program will be given to malpractice prevention. George Short, Defense attorney for the Insurance Company of North America, will give the medical students some pointers on how to avoid legal pitfalls of medical practice.

The entire program for the two days is as follows:

### Sunday, November 2nd

1:00 p.m.—INTRODUCTION: Hillard E. Denyer, M.D., President, Oklahoma State Medical Association

1:15 p.m.—STARTING A PRACTICE —PART I: Jim Loy, Administrator, Chickasha Clinic  
Types of Practice

Operational Efficiency (Traffic Control and Scheduling)

Purchase of Supplies

Hospital Privileges and Relations

Detail Men

2:45 p.m.—COFFEE AND CONVERSATION

3:00 p.m.—PERSONAL INSURANCE: Walter C. Wilson, Vice-President, Wilson and Wilson Insurance Agency

Life and Health Insurance

Pension Plans

4:00 p.m.—GOVERNMENT PROGRAMS: (Coverage and Claims)  
Medicare—Aetna Medicare Administration

Medicaid—Department of Public Welfare

CHAMPUS — Oklahoma Blue Cross and Blue Shield

5:30 p.m.—ADJOURN

### Sunday, November 9th

1:00 p.m.—ASSOCIATION MEMBERSHIPS: Ed Kelsay, Associate Executive Director, Oklahoma State Medical Association

1:15 p.m.—STARTING A PRACTICE —PART II: Tom Emel, Administrator, Oklahoma City Clinic  
Hiring of Personnel  
Leasing and Buying Equipment  
Billing and Collection Systems  
Record Systems (Medical and Business)

2:45 p.m.—COFFEE AND CONVERSATION

3:00 p.m.—BUSINESS INSURANCE: Rod Frates, President, C. L. Frates and Company Insurance Agency

Premises Liability

Casualty

Income and Overhead Protection  
Professional Liability

4:00 p.m.—MALPRACTICE PREVENTION: George Short, Attorney, Defense Counsel for the INA

5:30 p.m.—ADJOURN □

## Denver Hosts AMA Convention

The American Medical Association will hold its 23rd Clinical Convention in Denver, November 30th through December 3rd.

This year's AMA Clinical Convention is the third to be held in The Mile-High City. Denver previously was host city in 1952 and 1961.

Scientific sessions are planned mornings and afternoons, Monday through Wednesday, covering the latest developments in a variety of areas including heart disease, cancer, and pulmonary problems.

Roundtable sessions, previously conducted as breakfast gatherings, will be held over lunch at this year's Clinical Convention. Topics include the battered child, problems related to suicide and human sexuality.

About 25 medical motion pictures will be shown, including several premiere showings.

The entire program will be carried in the issue of *The Journal of the American Medical Association* dated October 20th.

AMA's House of Delegates will meet in the Denver Hilton Hotel. Other sessions of the convention will be held in Denver's Convention Center Complex.

Some 3,000 physicians are expected to attend the four-day convention. Guests, medical students, registered nurses and other members of allied health professions, and industrial exhibitors are expected to bring the total to about 7,000.

Closed circuit television programming is planned for the major hotels where those attending the convention will be staying. □





The expanded OSMA headquarters, as shown above, is nearing completion.

## Century Club Supports Headquarters Expansion

A fund raising campaign to help finance the expansion of the OSMA's headquarters building has been launched by the Committee on Planning as authorized by the Board of Trustees.

Doctor Scott Hendren, committee chairman and OSMA past-president, said that memberships in the OSMA Century Club are being made available to those physicians who contribute \$100 or more toward the building program. Century Club members will have their names engraved on a handsome plaque to be permanently displayed in the association headquarters.

A direct mail announcement of the Century Club is being made to all OSMA members.

Previously, the House of Delegates noted that the needed expansion of the building would seriously deplete association reserves and authorized the solicitation of voluntary contributions in order to restore reserves to a comfortable level and to purchase the necessary furniture and equipment for new conference rooms and other facilities.

A provision was made on the 1969 dues statement for voluntary, tax-deductible contributions of \$15, and this produced over \$15,000 from state physicians, some of whom gave much more than the minimum amount. In addition, the Woman's Auxiliary to the OSMA dedicated \$2,000 to the project and individual auxiliary members have also contributed.

Physicians who have already given \$100 or more will automatically become members of the Century Club. Those who have previously given the \$15 minimum contribution need only add \$85 in order to qualify for this special group of OSMA benefactors.

Doctor Hendren said that the mail solicitation will provide for several options: (1) direct payment of the full amount; (2) partial payment with a pledge for the balance; or (3) a pledge for the entire specified amount to be billed on an installment plan.

OSMA's headquarters building was constructed in 1957 to accommodate operations at that time and in the foreseeable future. Twelve years later, however, the dynamic changes in medicine, particularly those of a socio-political-economic nature, have called for increasing activities in order to keep pace with rapidly breaking developments. Only two employees have been added during the 12 year period, but committee activities have become much more diversified and the frequency of meetings concerning association projects and problems has at least tripled.

The old building contained 5,000 square feet and only two conference rooms which have proved to be inadequate to meet today's frequent need for multiple meetings on the same day. Moreover only two private offices were available for the three staff executives, and filing and workroom facilities had been outgrown by the volume of work.

"Most physicians have found it necessary to increase their space or improve their facilities during the last decade," Doctor Hendren said, "and the OSMA is now caught in the same situation. We cannot afford to fall behind from an organizational standpoint during the next decade when our futures are so dependent on our collective and united efforts in the face of extreme external pressures to redesign America's health care system. The expanded building will give us the physical plant to help meet the challenge."

OSMA's remodeled and expanded structure, now nearing completion, will add two new conference rooms, a new Board of Trustees' room, two new private offices, larger workroom and filing facilities, and a basement area. In addition, provision has been made to lease office space to the Oklahoma County Medical Society whose lease income will come close to retiring the OSMA's loan expense for the entire building program.

As previously stated, Century Club funds will be used to restore reserves which have been reduced to a level of \$20,000 and to purchase necessary furniture and equipment.

"The Century Club is an important project," Hendren concluded, "and I hope that the physicians of Oklahoma will bolster their central organization by contributing generously so that we may be prepared for the critical years ahead." □





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## Medical Assistants Attend Hawaii Meeting

Honolulu, Hawaii is the site of the 13th Annual Meeting of the American Association of Medical Assistants currently in progress in Honolulu, Hawaii. Approximately 30 medical assistants from Oklahoma are attending the four-day convention held in the Ilikai Hotel.

Among the notable speakers appearing on the program are Christian Barnard, M.D., University of Cape Town Medical School and Groote Schuur Hospital, South Africa; Willis Henry Moore, Bishop Museum in Honolulu; and, Gerald Dorman, M.D., President of the American Medical Association.

About 100 newly Certified Medical Assistants are being honored at a special dinner with the presentation

of certificates by the chief medical director of Merck, Sharp & Dohme, supporters of the certification program.

Among those receiving recognition for certification in both clinical and administrative categories is Mrs. Bobbie Antrim of Oklahoma City. She is the first in Oklahoma to attain dual certification and one of only 99 dually certified medical assistants in the U.S.

Delegates from Oklahoma elected to represent the state medical assistants organization are Mrs. Enid Bretz, Oklahoma City, president-elect of the state organization; Mrs. Sammie Smith, CMA, Lawton, current state president; and Mrs. Virginia Raines of Tulsa.

Oklahoma City physicians attending the convention are Rex E. Kenyon, M.D., a member of the Advisory

Board to the AAMA and Doctor Robert Outlaw. □

## Certification Begins For Family Doctors

The first examination for certification by the American Board of Family Practice has been announced for February 28th-March 1st, 1970. The examinations will be held in various centers throughout the United States.

Information regarding the examination and eligibility for the examination can be obtained by writing to Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506. □

## Med School Benefactors Honored



Five persons were honored recently at an awards luncheon given by the Medical Research and Development Office of the University of Oklahoma Foundation, Inc., for contributions of \$10,000 or more to the educational and health needs of the O. U. Medical Center. Participants at the meeting are (from left) H. O. Harder, Tulsa, chairman of the University of Oklahoma Foundation; John Houchin, chairman of the O.U. Board of Regents. Receiving Medical Ambassador Awards are: Doctor E. T. Dunlap, Chancellor of the Oklahoma State Regents for Higher Education; Doctor Don H. O'Donoghue, chairman of the Department of Orthopedic Surgery, O.U. Medical Center; Mrs. Frederick Charles Seids, Perry, Oklahoma, who received the Dental Ambassador Award; Maynard Greenberg, Oklahoma City, receiving the Medical Ambassador Award for his brother Alan C. Greenberg, New York City; Doctor Mark Allen Everett, Chairman of the Department of Dermatology. Also pictured are Doctor William E. Brown, newly appointed Dean of the School of Dentistry and (back row) Doctor James L. Dennis, O. U. Vice President and Dean for Medical Center Affairs. □



## Physician Coverage Under "Truth in Lending" Explained

Since enactment of the Federal "Truth in Lending" Act and Oklahoma's Consumer Credit Code, OSMA officials have been working diligently to determine to what extent Oklahoma doctors are affected by the laws. Following is a letter from Mr. Roy C. Lytle, OSMA's legal counsel:

October 1, 1969

David Bickham, Associate

Executive Director

The Oklahoma State Medical Association

P.O. Box 18696

Oklahoma City, Oklahoma 73118

Dear Mr. Bickham:

You have made inquiries of us as to what a doctor of medicine or other professional man must do in order to comply with the provisions of the Uniform Consumer Credit Code which is part of the laws of the State of Oklahoma. You will perhaps remember that the Congress of the United States passed a Federal Consumer Credit Protection Act, commonly referred to as the "Truth in Lending Act." This law, in considerable detail, provides for disclosure of certain facts when consumer credit is granted. The purpose of the federal law, as well as that of the state law, is to provide protection to the consumer and requires disclosure of the costs to him of credit extended. The federal law does not apply to business or commercial transactions, and there are certain other exemptions, but these exemptions do not necessarily cover the relationship of a doctor and his patient.

The federal law further provides that exemptions shall be granted where a state enacts a law which is substantially similar to the federal law. The Oklahoma law has been adopted and is referred to as the Uniform Credit Consumer Code. It became effective on July 1, 1969. There is now pending before the Federal Reserve Board the State's application for exemptions of credit

transactions from federal regulatory control. This exemption has not yet been granted, but it is generally assumed that it will be granted because there is very substantial similarity between the Oklahoma statute and the federal law.

We have discussed, on an informal basis with Richard L. Wheatley, who is the administrator of the State statute, these problems as they apply to professional people. He has been most helpful in pointing out the areas of the law in which he feels that consideration should be given. As administrator he has been extremely hesitant to issue any rules or regulations, and undoubtedly will not issue any, at least until the jurisdiction of "truth in lending" is vested in the Oklahoma statute rather than in the federal statute. It is the opinion of Mr. Harrington and me that a professional man comes within the purview of the Uniform Consumer Credit Code under each of the three following situations:

1. If a doctor charges interest, a finance charge or other comparable fees to a patient for the privilege of having credit extended, the doctor comes within the Act.

2. If a doctor has a time-price differential, he is within the Act. For example, if he says that he will perform a certain procedure for \$200.00 if payment is made in cash, or for \$250.00 if payment is made in installments, it is obvious that the difference between the cash fee and the deferred fee is, in reality, a charge for credit.

3. If a doctor agrees with his patient that his fee is payable in four or more installments, even though there be no time-price differential or interest charged, he is within the Act.

A doctor will not be covered by the Act if he does either of the two following things:

1. Makes no agreement for any deferred payment, and simply charges his patient on a so-called 30-day basis. This is true even though the patient may pay only a portion of the statement. It is recommended that if a charge of \$100.00 is made for a certain surgical pro-

cedure, that the patient be billed for that amount. Assuming that the patient only pays \$25.00 on the account, the next monthly billing would be for \$100.00, with a showing, however, of a credit of \$25.00, and with a balance due of \$75.00.

2. If a doctor wishes to agree upon installment payments, he may do so, provided that there is no down payment and that there are less than four installments. Obviously under this exemption there cannot be any interest or other finance charge for the privilege of paying in installments.

In the event that a doctor cannot or does not handle his collections or billings on either of the two exempt methods, then the doctor is required to notify the administrator, furnishing certain information such as name, address and other readily available information. He is also required to pay annually a fee of \$10.00. If the amount of credit exceeds \$100,000.00, he is required to pay an additional \$10.00 per \$100,000.00 of credit extended, and an additional \$10.00 per \$100,000.00 of original unpaid balances.

In all cases where the transaction is not an exempt one, the doctor must comply with the disclosure provisions of the statute, even though the disclosure may amount to nothing more than a statement to the effect that no interest or other charge is made in connection with the granting of credit or permitting fees to be paid in installments.

I am not entirely sure in my own mind that those who framed both the federal and the state law had in mind the problem of the doctor in relationship to his financial dealings with his patients. I must confess, however, that the language of the statute is rather all inclusive, and there is no specific exemption in the statute for professional people. We have a little difficulty in imagining a patient bringing charges against his doctor because the doctor had failed to spell out or disclose the fact that there either was or was not some credit charge, either directly or indirectly, involved in the fee being charged him. If there



were no charge for credit extended, I have considerable doubt that much could be done against a doctor merely because he had agreed with the patient that the patient could make payments over a period of months. I think as counsel for the Association, we must tell you what we understand the law to require, and we think that we, in all good conscience, should recommend that the law be complied with, but if a doctor more or less inadvertently makes a mistake, I would not think that it would be too serious a thing.

Very truly yours,

LYTLE SOULE & EMERY

By Roy C. Lytle

RCL:msp

□

## National SAMA President To Be in State

Edward D. Martin, President of the Student American Medical Association, will be in Oklahoma on October 24th to address a banquet being given by the OSMA for members of the Oklahoma Chapter of SAMA.

The banquet will be held in the Skirvin Hotel and all local members of SAMA and their spouses are invited to attend. The banquet is a yearly function of the OSMA.

All officers, board members, and OSMA delegates and alternate delegates to the AMA will be invited to attend the banquet.

Keynote speaker Martin is a junior medical student in the Kansas University School of Medicine. He took his undergraduate work at Washburn University and completed his A.B. Degree at the University of Kansas. He has served in the United States Navy and is a PhD candidate in physiology and a research fellow in physiology for the University of Kansas Graduate School.

Martin's SAMA activities include National SAMA Treasurer in 1968-69.

The yearly banquet gives members of the OSMA an opportunity to visit with medical students in a social setting. In years past it has been an occasion for a vigorous exchange of ideas and philosophies that has profited both the medical student and the practicing physician. □

## Immunization Committee To Study "Rubella Sunday"

The possibility of a nationwide rubella epidemic has caused OSMA's Immunization Committee to consider supporting a statewide effort to immunize as many Oklahoma children as possible. Doctor Start, Chairman of the Immunization Committee, reported that the 1963-64 rubella epidemic cost the State of Oklahoma in excess of \$840,000 which does not include any estimate of the cost or emotional stress borne by families whose children had birth defects as a result of the disease. Since June, 1969, there has been a successful vaccine marketed by Merck, Sharpe and Dohme.

The Oklahoma State Health Department has plans to conduct an immunization campaign on a county-by-county basis, but because of limited funds, vaccine for only 50,000 can be procured. Doctor Start's committee estimates that as many as 300,000 susceptible children must be immunized if an epidemic is to be avoided.

Since rubella is normally a benign disease and because of the cost of the vaccine, the committee fears that utilization in the physician's office will be limited. "It is difficult," explained Doctor Start, "to convince parents of the necessity of immunity when the disease seldom has serious effects on the child. It is the unborn child we are concerned about. Serious birth defects are known to occur if a mother contracts rubella in the prenatal period."

In a letter to all Oklahoma physicians that announced plans for the immunization campaign, Doctor Start's committee recommends use of the rubella vaccine.

"We hope the vaccination program can be administered at the county level by county medical societies and other sponsoring groups," says Doctor Start, "the success of the Polio Sundays of 1963 indicate to us that this is a reasonable and sound approach." □

## Thomas Elected To A.A.G.P. Board



Harlan Thomas, M.D.

Oklahoma now has a representative on the Board of Directors of the American Academy of General Practice. Harlan Thomas, M.D., Tulsa, was elected to the office on September 29th at the A.A.G.P.'s annual meeting in Philadelphia.

Doctor Thomas is only the second Oklahoman ever to be a member of the board, preceded some years ago by Malcolm Phelps, M.D., El Reno. The board consists of nine members serving three years on staggered terms.

The doctor is a long-time member of the Oklahoma Chapter of A.A.G.P. and served as its president in 1960-61. Since 1964 he has served as a delegate to the academy along with C. Riley Strong, M.D., El Reno. He previously served as alternate delegate.

Doctor Thomas has also been very active in the OSMA, serving as its president during 1964-65, and is currently serving as one of the delegates to the American Medical Association. In addition he has served as chairman of numerous councils and committees for the association.

The doctor's other activities include long time service as the medical examiner for Tulsa County, and is president of Doctor's Hospital in Tulsa. □



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## Southern Medical Will Meet in Atlanta

The Marriott Motor Hotel, Atlanta, Georgia, will be headquarters for the meetings and exhibits of the 63rd Annual Meeting of the Southern Medical Association November 10th-13th, 1969.

A wide variety of scientific sections, over 200 scientific and technical exhibits and well-planned entertainment will be on tap for those attending. There is no registration fee.

### Section Highlights

Guest speakers and the sections before whom they will appear follows: William B. Sherman, M.D., New York City, Allergy; John P. Bunker, M.D., Palo Alto, California, Anesthesiology; Stanley E. Huff, M.D., Evanston, Illinois, Dermatology; Kenneth A. Huizenga, M.D., Rochester, Minnesota, Gastroenterology; Erle E. Peacock, Jr., M.D., Tucson, Arizona, General Practice; William B. Goddard, M.D., Lakewood, Colorado, Gynecology; Jack K. Wickstrom, M.D., New Orleans, Louisiana, Industrial Medicine and Surgery; Eugene D. Robin, M.D., Pittsburgh, Pennsylvania, Medicine; Samuel B. Guze, M.D., St. Louis, Missouri, Neurology and Psychiatry; A. Edward Maumenee, M.D., Baltimore, Maryland, Ophthalmology; Sherman S. Coleman, M.D., Salt Lake City, Utah, Orthopedic and Traumatic Surgery;

George A. Sisson, M.D., Chicago, Illinois, Otolaryngology; John B. Henry, M.D., Syracuse, New York, Pathology; William E. Laupus, M.D., Richmond, Virginia, Pediatrics; Arthur S. Abramson, M.D., Bronx, New York, Physical Medicine and Rehabilitation; B. Herold Griffith, M.D., Chicago, Illinois, Plastic and Reconstructive Surgery; James A. Ferguson, M.D., Grand Rapids, Michigan, Proctology; Howard L. Steinbach, M.D., San Francisco, California, Radiology; Earl E. Gambill, M.D., Rochester, Minnesota, and Walter F. Ballinger, II, M.D., St. Louis, Missouri, Surgery; and James F. Glenn, M.D., Durham, North Carolina, Urology.

## DEATH

MAURICE L. PETER, M.D.  
1908-1969

Oklahoma City-County Health Director, Maurice L. Peter, M.D., died September 29th.

A native of Oxford, Kansas, Doctor Peter graduated from the University of Oklahoma School of Medicine in 1933. He received his Master of Public Health degree from Johns Hopkins University and held various public health positions before being named to the Oklahoma City-County post in 1954.

He was a Past-President of the Oklahoma Public Health Association. □

In addition, a symposium will highlight the section of Obstetrics.

### Conjoint Societies

Several allied medical groups will meet conjointly with SMA. These include the American College of Chest Physicians, the Southern Chapter: Flying Physicians Association; the Radiological Society of North America and the Southern Gynecological and Obstetrical Society.

A special program, coordinated by N. C. Hightower, M.D., Temple, Texas, has been planned primarily for the benefit of the official medical student representatives who will be attending the annual meeting.

### Social Events

Planned entertainment includes the president's reception, the president's luncheon, the president's night, alumni reunions, a golf tournament and activities planned by the woman's auxiliary.

Detailed information may be obtained from the Southern Medical Association, 2601 Highland Avenue, Birmingham, Alabama 35205. □

## Insurance Review Committee Functions Smoothly

Newly reorganized, the OSMA Medical Insurance Review Committee is settling down to a steady work pace. At a meeting on September 28th in Oklahoma City, the committee reviewed five cases for physicians or insurance carriers.

The reorganization of the committee called for the creation of two subcommittees of ten members each. One subcommittee is chaired by overall committee chairman Mark

D. Holcomb, M.D., Enid, and the other is chaired by Howard B. Keith, M.D., Shattuck. It was Keith's subcommittee that met on September 28th.

The following is a synopsis of the cases heard on that date:

Case 1. The physician involved brought this case to the committee's attention. He and the insurance carrier were having a difference of opinion as to the value of a surgical procedure. In the letter bringing the case, the physician stated that the amount offered by the insurance company would have been a "minimal fee for this procedure 15 years ago . . ." The insurance company stated that this fee was higher than what it considered to be normal.

After talking with other physicians in the same specialty, it was the committee's opinion that the surgical difficulties encountered in this particular case were severe enough to justify the above average fee. However, the committee did not determine that the amount billed should be considered a normal fee for the procedure.

Case 2. The insurance company requested the committee's opinion as to the medical necessity for frequent nursing home visits to a patient whose diagnosis was given by the physician as being, "bronchitis, emphysema cardiovascular disease, shortness of breath, arteriosclerosis, pain in leg, very poor circulation, needs oxygen at times because of emphysema, precordial pain, vitamin deficiency."

After reviewing the records available, it was the committee's opinion that in this case and with this diagnosis the frequent nursing home visits were justified.

Case 3. Both the insurance com-



pany and the physician involved asked the committee to review this case. The physician had performed two surgical procedures on a patient on the same day and had billed full fees on both of them. It was the opinion of the insurance company that a full fee for both procedures was not justified.

The physician had furnished to the committee a copy of his operative record and the surgical pathological report along with a letter of explanation. After a review of these documents it was the committee's opinion that in this case the physician was justified in two full fees. The surgical procedures had been separated by a 30 minute delay and required separate preparations. The procedures could just have easily been performed on separate days with a prolongation of hospitalization being the only result.

Cases 4 and 5. These two cases were related and the committee concluded that they were actually a misunderstanding between the physician and the insurance carrier. There had been a breakdown in communications between the two parties and they had failed to convey the necessary information to each other in order to settle their differences. It was the committee's recommendation that they negotiate directly and if they could not reach an agreement that they return to the committee at a later date. □

## Research Council Appoints Mickey Mantle

The announcement of the appointment of members of a Development Council for the Medical Center Research and Development Office was made on September 19th by Lee O. Teague, Director of Development for the OU Medical Center.

Out of state members appointed to the Council include Mickey Mantle of Dallas, Texas and Alan C. Greenberg, both native Sooners.

Those appointed from Oklahoma City area including Trustee Advisors are: Mrs. Dewey Bartlett, Edward L. Gaylord, Mrs. G. T. Blankenship,

Richard H. Clements, Mrs. Charles R. Coe, Don Greve, Stanley C. Draper, Sr., S. N. Goldman, Doctor William C. Hopkins, Kenneth E. McAfee, Reece McGee, Bishop Paul W. Milhouse, Doctor Dean Robertson, Dr. Earl Sneed, V. C. Bratton, Mrs. Laurence Youngblood, Doctor Don H. O'Donoghue, and Doctor Mark Allen Everett.

Members appointed from Tulsa include Harold Stuart, William H. Bell and H. O. Harder, chairman of the Board of Trustees for the University of Oklahoma Foundation, Inc.

Members from Bartlesville include William Zeman and John Houchin, chairman of the University of Oklahoma Board of Regents and member of the Board of Trustees of the OU Foundation.

Also Roy Smith, Norman; James Leake and L. F. Rooney, Muskogee. Edmund Kennedy, Pawhuska, J. A. French, Sayre; McMillian Lambert, Ardmore; C. L. Priddy, McAlester; L. L. Males, Cheyenne; Henry Hitch, Guymon; Doctor L. A. Farmer, Ponca City, and Mrs. Frederick Charles Seids, Perry.

The new development council will serve as a coordinating board whose prime concern will be the educational and health needs of the Medical Center which will make possible the production of health manpower needs for the state. Foremost among these needs are new facilities, such as new schools of nursing, dentistry, public health and health related professions, as well as an increase in hospital facilities and a graduate education center, Teague said.

Doctor James L. Dennis, OU Vice President and Dean for Medical Center Affairs said: "The establishment of a Development Council for the OU Medical Center is a red letter day. The OU Medical Center has the very best staff and health care available with 1930 facilities."

"Funds are urgently needed to develop a program of excellence. At this point in time, OU Medical School is 17th in the nation in terms of size. In terms of budget, we are in the bottom ten in the list of medical schools. We have mountains ahead to challenge us but if we keep our eyes on the importance of the task,

we can succeed."

In commenting on the appointments, John Houchin, Bartlesville, chairman of the University of Oklahoma Board of Regents said more funds are necessary to provide a full range of health service at the Medical Center. Long range objectives must be bold. He pointed out that children represent our greatest resource and should receive the best society can give them in terms of education and medical care. "Our most pressing need in Oklahoma is the health needs of children, he said. State money is not enough. We must make up the difference. We must depend on gifts and bequests from our citizens."

The Medical Center Research and Development Office of the University of Oklahoma Foundation was established earlier this year to handle gifts and grants made especially to the Medical Center. □

## Scholarship Available To American Indian

A \$3,000 fellowship is available to an American Indian who will enter the University of Oklahoma School of Medicine in the 1970-71 academic year.

The grant, the Charles Eastman Fellowship for American Indians entering their first year of medical school, was established by the Association on American Indian Affairs, New York, and matching funds are provided by the Mead Johnson Laboratories.

Each year the association will designate a university medical school to receive the funds and the school, in turn, will select the fellowship recipient.

The fellowship program was proposed by and developed in collaboration with the Committee on Indian Health of the American Academy of Pediatrics. The committee chairman, who can provide additional information on the 1970-71 grant, is Harris D. Riley, Jr., M.D., head of the Department of Pediatrics, Children's Memorial Hospital, University of Oklahoma Medical Center, 800 N.E. 13th, Oklahoma City, Oklahoma 73104. □



## Specialty Societies To Receive OSMA Staff Help

The Committee on Planning agreed on October 5th to provide staff assistance from OSMA personnel to help specialty societies carry out their projects and activities.

Action came following a conference called on June 29th by OSMA president, Doctor Hillard Denyer, where he called together the Committee on Planning and officers of the association to consult with special-interest medical societies for the purpose of discussing areas of mutual interest. Many specialty societies expressed a desire to receive help from OSMA staff on a formalized basis, and the Committee on Planning has now agreed to furnish this service on a cost-time basis.

Presidents of special-interest groups will be contacted soon regarding a basic proposal which will serve as a guideline for individually negotiated agreements. Planning committee chairman Doctor Scott Hendren said the program will be implemented in such a way that non-participating groups will not have to underwrite the activity. In other words, dues funds will not be involved; instead each arrangement with a specialty society will necessarily stand on its own financial feet.

In a further effort to enhance OSMA relationships with special-interest organizations, the planning group will recommend to the OSMA Board of Trustees that an Advisory Panel be created where representatives of all recognized organizations will be invited to provide counsel to association councils, committees and policy-making bodies.

The Committee on Planning also recommended that a special committee be created to study and make recommendations for placing more physicians in rural areas where there is a demonstrated shortage. Considerable legislative interest has been expressed regarding this problem, and the committee feels that the OSMA should attempt to serve as a

nucleus to coordinate efforts toward workable and mutually agreeable solutions.

A meeting of the Planning Committee will be held at Fountainhead Lodge on the weekend of November 8th and 9th to discuss and formulate long range plans on such subjects as the growing pressure for universal health insurance and other important matters.

In addition to Doctor Hendren, the committee is composed of the OSMA president, president-elect, speaker of the House of Delegates, chairman of

the Board of Trustees, and the chairmen of the association's six councils. □

## ACS Inducts Five Oklahoma City Physicians

Five Oklahoma City physicians were made Fellows of the American College of Surgeons, October 9th, in San Francisco. They were: Don F. Rhinehart, M.D., Orville L. Rickey, Jr., M.D., Kenneth A. Rogers, Jr., M.D., Jack D. Spencer, M.D., and Stephen Tkach, M.D. □

## BOOK REVIEW

**PAEDIATRIC CARDIOLOGY.** Edited by Hamish Watson. St. Louis: The C. V. Mosby Co., 1968. 996 pp. \$36.50.

This textbook edited by Hamish Watson from Scotland is written by 39 contributors from various countries chosen for their knowledge in specialized fields of pediatric cardiology. The text surveys present-day trends and facts on the subject as they have been gleaned from the world literature. It contains 68 chapters covering almost 1,000 pages. The international approach makes the volume interesting and more useful than the usual nationally oriented work. The editor begins with important background information: embryology, cardiac anatomy, fetal and neonatal circulation, the incidence of congenital heart defects and review of diagnostic methods and their application. The various congenital lesions are then taken up chapter by chapter and occupy two-thirds of the book. All aspects of pediatric cardiology including acquired heart disease and cardiac problems complicating other illnesses are discussed in reasonable detail. Contrasts are brought to light as the reader is exposed to entities and statistics which differ from those of his country and experience. Major emphasis is placed on physiology, embryology and anatomy. Two additional and unusual sections for such a textbook are those dealing with the "Social Implication of the Child with Heart Disease" and

"Pediatric Cardiology in the Tropics."

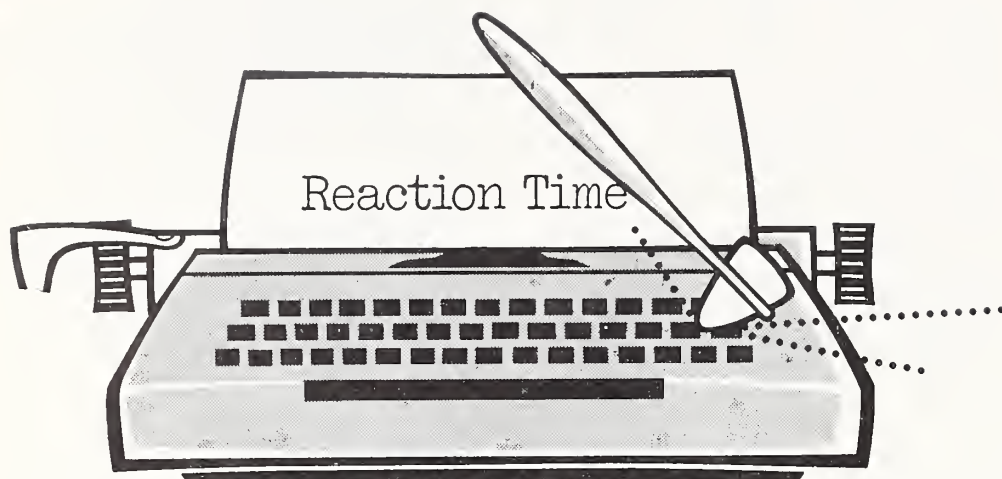
Chapters which seem particularly strong include those on anatomy, atrial septal defect, coarctation of the aorta, congestive heart failure, and certain chapters on selected defects. The text is scholarly, the bibliographies are extensive and representative of the literature, the index is comprehensive and detailed. Despite the number of contributors, the editor has maintained continuity and unusual uniformity.

Although the book is printed on paper of excellent quality and some of the illustrations are excellent, the x-ray reproductions in several chapters are, in certain cases, technically poor.

The editor, an internist, has devoted most of his career to pediatric cardiology. The inclusion of physicians working with adolescents and adults, while facilitating a broad view of the picture of heart disease, unfortunately tends to reintroduce an old and common error; the internist concentrates on what for him is the large picture, i.e., the "big" child, to the de-emphasis of the larger problems of infancy.

Because of its size, cost and the detailed nature of the contents, this book will probably be of more value to the pediatric cardiologist than to the general pediatrician. It is a significant addition to the literature on this subject and will prove valuable to those concerned with children with heart disease—Harris D. Riley, Jr., M.D. □





August 6, 1969

Hillard E. Denyer, M.D., President  
The Oklahoma State Medical Association

P. O. Box 18696

601 Northwest Expressway

Oklahoma City, Oklahoma 73118

Dear Doctor Denyer:

I am enclosing my ballot indicating that I favor continuing the present OSMA's policy of requiring membership in the AMA. I have felt all along that this is what we should do, in spite of the fact that I am highly sympathetic to some of the reasons other members have for wanting to change the policy.

I do feel that over the years many of the actions of the AMA have been inept and ineffective. The unsuccessful offering of the concept of "Elder-Care" in opposition to "Medicare" is perhaps a good example. I feel that although AMA failures may be attributed in considerable measure to mediocre leadership, nevertheless an equal or greater share of the responsibility rests on the actions or inactions of the membership. The education of most of us in the past has been such that we come to be so cussedly independent that it is difficult to get more than two doctors to agree on anything. This seems to work out all right in the scientific and clinical aspects of medicine, but it is an enormous

handicap when we try to exert any joint effort in the socio-economic, or political fields. Most of us are dismally poor politicians and have such a supreme distaste for the political approach to anything that we cannot wake up to the full implications of the fact that the political approach is being used powerfully and effectively by many other groups in our society to further objectives which we may disagree with very strongly.

I am not sure how much is being done now on the medical student level through the SAMA or otherwise to educate young doctors to the importance of effective group action by physicians, and what must be done to achieve it; but I think there is an urgent need for this type of teaching. Needless to say, I do not think it should be carried out by the leftward-leaning collectivists who seem to be only too well represented within our ranks.

If someone could put together a history of the political and socio-economic activities of organized medicine over the past several generations, it could be a very useful textbook for such teaching, especially in demonstrating how not to do things.

As far as the AMA is concerned, I think we must all do our best to strengthen it and help it to represent us more effectively. I even think a

hard look should be given to the possibility of reversing the past policy and trying to get the AMA qualified as a labor union if the privileges and immunities enjoyed by these organizations in the past 30 or 40 years are going to be continued. If the political machinery of our country is going to continue to control us as it has been doing to an increasing and alarming extent and if we doctors are going to try to stay in the game at all with any political effectiveness, I think we will have to "play it like it is."

Yours sincerely,

S. FULTON TOMPKINS, M.D.

August 21, 1969

S. Fulton Tompkins, M.D.

5700 Northwest Grand Boulevard  
Oklahoma City, Oklahoma 73112

Dear Doctor Tompkins:

I have just read your timely and thoughtful letter. It voices many of the things that others of us have left unsaid or at least dealt with less articulately.

As I come to grips with the problems of our state organization, I repeatedly feel the necessity for improving communications—with ourselves and with the public we serve. And as in the past, new and different ways of doing this are being explored.

Additionally, the speed of change in the socio-economic field is accelerating faster than ordinary methods effectually cope with the problem.

As you have stated so well, our organization demands more individual participation. It is not a case of what a handful of officers and committee members and staff can do for the individual member, but what all the individual members acting in concert can do for the common good. I can see bursts of this brain power from time to time as the wealth of this commodity comes to bear on a problem in which all the members do become interested.

I would hope you would permit Doctor Mark Johnson, the Editor of the Journal, to print your fine letter should he find this possible.

Cordially,

HILLARD E. DENYER, M.D.  
President ☐



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Dear Auxiliary Members:



Mrs. Virgil Ray  
Forester

Memories of AMA Convention linger, such nice memories for Oklahoma brought honor to its beautiful, wind swept prairies by putting an extra ball of fringe on the surret, for top honors were accorded our beloved state, so famous for its glorious sunsets and medical auxiliary.

A Recognition Award for Achievements in Membership was presented to Oklahoma for its outstanding effort to recruit members-at-large . . . thanks to 1968-1969 vice-presidents Mrs. E. Cotter Murray, Oklahoma City, and Mrs. William M. Leebron, Elk City. Congratulations.

Members of Atoka-Bryan-Coal County Auxiliary displayed their love and affection for last year's first lady, by being endowed with an AMA-ERF Achievement Award for the highest per capita donation by a county auxiliary—a splendid feat, well done for Mrs. Alfred T. Baker.

An Award of Honor was presented by the Women's Division of the National Safety Council to Oklahoma County Auxiliary for its Teen Sitter Workshop program. Mrs. Charles Bodine, Oklahoma City and state chairman, accepted this commendable presentation from Mrs. Charlotte Montgomery of "Good Housekeeping" fame. Oklahoma is proud.

Pottawatomie County Auxiliary had a most informative display on AMA Auxiliary's Show and Tell Exhibits which included Doctors' Day, International Health History of the First Auxiliary and the V.D. Package Program. Mrs. Frank Howard, president and her group made great strides in presenting the V.D. program to high school students in Shawnee during several sessions. A salute to my old home town.

Among those representing state at the convention were: Mrs. J. Hartwell Dunn, Mrs. William Leebron, Mrs. Harlan Thomas, Mrs. H. E. Denyer, Mrs. Charles D. Bodine and Mrs. George Winn.

Your editor was also attending the convention representing our state as a Director for AMA Auxiliary—National was a good meeting. Mrs. John M. Chenault did a mag-

nificant job bridging the gap in Esther Long's absence—of which all present were so keenly aware. We shall long remember.

In this busy auxiliary world, there are many meetings scheduled, such as:

October 16th-17th: AMA Southern Regional Workshop, Dallas; Mrs. Dunn, Mrs. Leebron and state staff and Mrs. Forester attending.

November 10th-13th: Southern Medical Association, Atlanta. Please come—It is going to be fabulous, thanks to the Georgia girls.

#### OCTOBER STATE FALL CONFERENCE

Oklahoma State Medical Association building, Mrs. J. Hartwell Dunn presiding. Come, learn and have fun.

Our auxiliary outlook for 1969 is excellent from county, state and national standpoint with our many splendid county presidents—capable Mrs. J. Hartwell Dunn as state leader, Mrs. R. C. L. Robertson, Houston, Texas, is our new National President-Elect. Mrs. Robertson, a dynamic speaker is most active in medical and civic affairs.

Mrs. G. Prentiss Lee, Portland, Oregon, an outstanding Vice-President of AMA Auxiliary is making great strides in her membership program; having just completed a membership manual. Mrs. John M. Chenault, National President, whose cultural and educational background augmented by her many abilities and several years of auxiliary experience, is a leader in her own right.

In Mrs. Chenault's inaugural address, the new president urged the organization to step up its efforts in helping youth. She stated that our task and our challenge is to commit ourselves to assisting our young people, as well as our mature citizens in outlining a plan for carrying the theme she has selected for her term of office, "Active Leadership in Community Health with Accent on Youth."

Personally yours in auxiliary,  
ZELLIE

P.S. Remember there is nothing greater than being a doctor's wife.



Delivery of health services in rural areas will be the purpose of a new OSMA committee created by President Hillard Denyer. The new committee will work with legislative committees and health planning groups on proposals for placing more physicians in rural areas. It will concentrate efforts in those areas where justification of actual need can be determined.

**Legislative and private efforts to improve health delivery in rural areas** have taken some interesting and unique turns in the past. During the last legislature a bill was introduced that would require each medical student entering the OU School of Medicine to sign a contract stating that he would serve in a rural Oklahoma community for a period of time after he graduated. Another plan has been suggested where a community would sponsor, financially, a medical student who would then come to the community to practice after he graduated. The OSMA committee would study such proposals and make additional proposals of its own.

**Roger O. Egeberg, M.D., Assistant Secretary of Health and Scientific Affairs, Department of HEW**, will be in Oklahoma City on November 7th for several personal appearances. During his visit he will meet with a delegation of Oklahoma physicians representing the OSMA. His appearance in Oklahoma City has been arranged by the Oklahoma City Clinic and will include an address to the Friday Forum of the Oklahoma City Chamber of Commerce and an address to the student body of the University of Oklahoma School of Medicine. In the evening he will speak at a commemorative banquet for the 50th anniversary of the Oklahoma City Clinic.

**Washington watchers are predicting that HEW's task force on Medicaid** and related problems will recommend a national health insurance program and stress the importance of it being handled by the private business community. The task force, headed by Blue Cross President Walter McNerney, is winding up a sweeping set of recommendations

which are expected to include suggestions for immediate steps to be taken and for long range remedies to the ills of Medicaid, Medicare and other health care programs.

**Almost nine out of every ten Americans below age 65 (89%) were covered by private hospital expense insurance at the end of 1968**, according to a recent health insurance council study. Of those covered for some or all of the hospital expenses, 92 percent also had surgical expense protection and 76 percent had non-surgical medical expense coverage. Benefits paid by private health insurance tallied \$11.6 billion during 1968. Of this total, \$1.4 billion was for disability income and \$10.2 billion for the medical and dental expenses of persons under age 65. A growing area is for dental expense insurance currently covering 3.1 million persons—more than five and one-half times the number insured in 1963.

**Effective January 1st, Medicare patients must pay the first \$52.00—rather than \$44.00—of their hospital bills.** Social Security Commissioner Robert M. Ball said the increase was the result of rising hospital costs and general inflation. Hospitals received \$4 billion in Medicare payments during the last fiscal year. About six million Medicare patients entered hospitals during the period. Part B Medicare premium paid by the elderly is expected to be increased, probably to \$5.00 per month. The rate was \$3.00 when Medicare was enacted, but was boosted to \$4.00 in 1967 to cover the original under estimate. Last year Social Security actuaries said an increase to \$4.40 was necessary to keep the Part B Fund in balance, but outgoing HEW Secretary Wilbur Cohen disregarded the advice and left the boost up to the Nixon administration. Now the rate must be raised even higher to make up for losses. The rate increase is expected to bring more criticism of physician fees, although much of the problem is general inflation and much stems from early political attempts to make an expensive program appear palatable.

**U. S. House of Representatives recently voted on a resolution** providing for the direct election of the President by popular vote. As reported in the Congressional Record all six Oklahoma representatives voted in favor of the proposal. □



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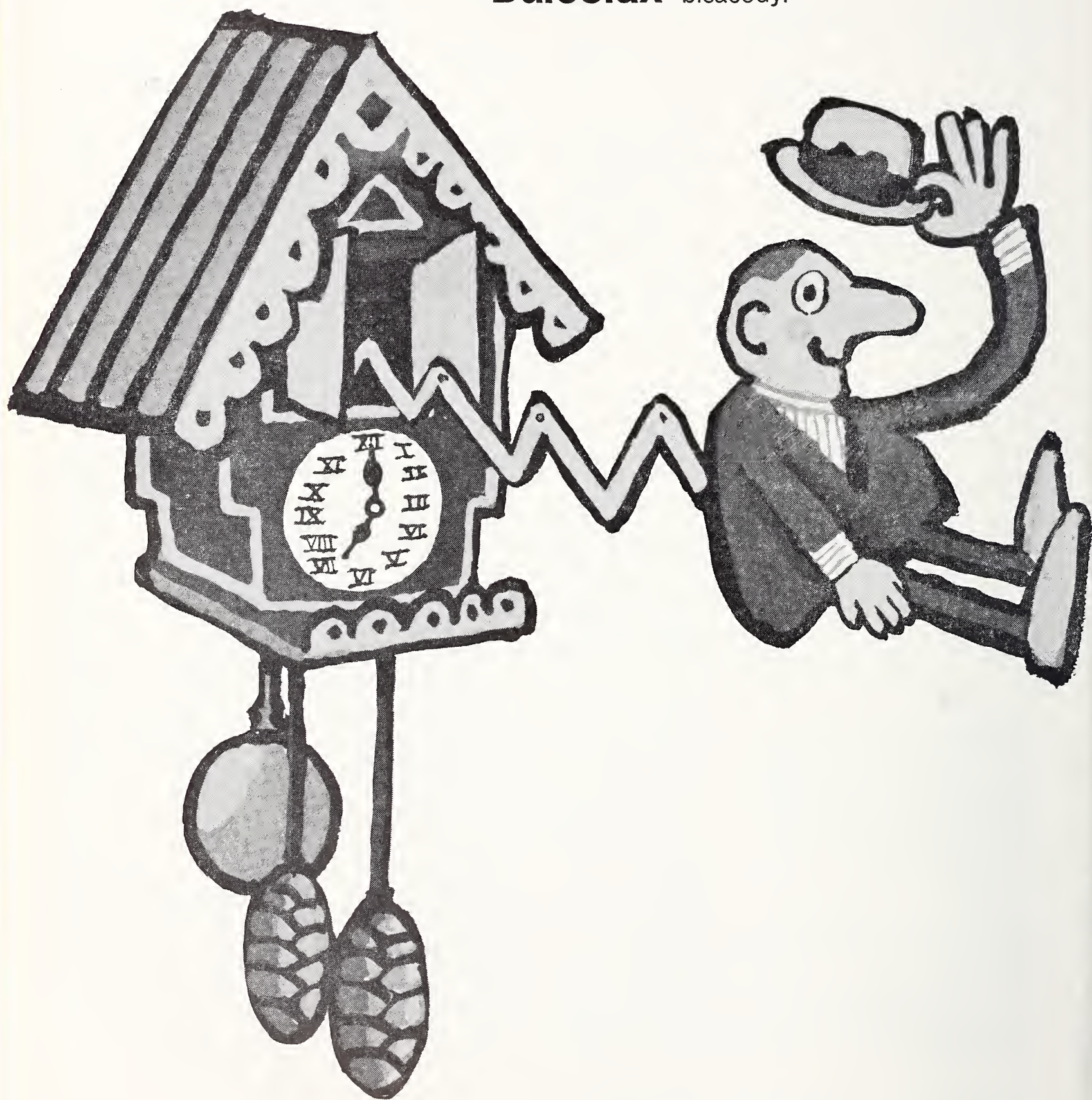
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## Dear Patient . . .

**ALTHOUGH** I've thought about it often. I have never found the time to thank you for being one of my patients. I may never show it, but I am flattered by the confidence you have expressed in selecting me as your physician. I realize there aren't as many doctors as there are grocers and that you didn't have much choice under the circumstances, but you were free to choose and you came to me, voluntarily, with your troubles and your problems. I want you to know how much I appreciate your trust.

I know there have been many times when you wanted to call me but, not wanting to disturb me at mealtime, you contained your anxiety and waited. A few times you have awakened in the middle of the night, sick and in pain, but because you didn't want to disturb my sleep you suffered until dawn before you called. I want you to know how grateful I am for your compassion.

You have waited hours . . . sometimes days to see me, yet you've never complained or expressed any resentment. You have waited for me to return from the hospital, to finish lunch, to complete a telephone call, to conclude a visit with an old friend or a member of my family. You have waited for me to return from a vacation, a fishing trip, an afternoon of golf, a medical meeting, a civic function, a party. You have had your appointments changed . . . you have accepted earlier ones and later ones and less convenient ones just to accommodate my schedule and my life. I want to thank you for your patience and your cheerfulness.

Living costs being what they are, I know from personal experience that unexpected expenses can be a depressing, terrible, sometimes even frightening burden. But you have always remembered me at bill-paying time. Sometimes you could pay only a dollar or two. Once you couldn't pay anything, but you called my office and explained. You've never ignored an indebtedness. I know

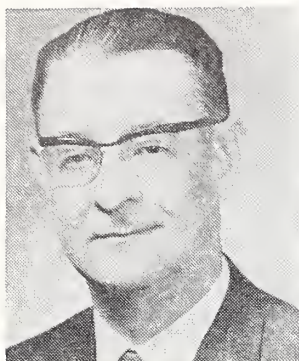
you've done without a lot of luxuries and even a few necessities at times, to pay for your medical care. Obviously you felt that my services were worth your sacrifice. I respect you for this, and accept my obligation to insure that your sacrifices are not in vain.

I am a human being and you know it. I have many faults and you are aware of most of them, but you forgive them and usually treat me with exceptional courtesy, kindness and tolerance. You are a true friend. I cherish your friendship.

If, in the years to come our relationships are forced to change, I will sense a great loss. I can foresee that you might be "assigned" to me instead of voluntarily selecting me as your physician and that will erode your trust. I can envision the time when you will contact "the doctor on duty," or go directly to a 24-hour "outpatient clinic" when you need medical care. That will compromise the gratitude. Your relationships with your doctor will be virtually impersonal and that will destroy the friendship. I anticipate the day when all of your medical expenses will be prepaid by a "fiscal agent" who took the money from you before you could make any decision about how it would be spent. What . . . and who will that destroy?

I hope you can understand why I picked this particular time to express my gratitude. I am truly and deeply appreciative of your role in our relationship, your contributions to our friendship. Time is growing short and I must correct an oversight before it is too late. Thank you, and Happy Thanksgiving.—*M.R.J.* □





Determination to alter the method and manner of health care delivery has been recently advocated by the leaders of very influential segments of our country. These include both major political parties, organized labor—including AFL-CIO, United Steel Workers, United Automobile Workers—as well as the American Hospital Association, American Nurses Association, and the Student American Medical Association.

While listening to these leaders speak, I have been impressed by their resolve and the urgent character of their demands. Whether organized medicine can preserve the private practice of medicine is suspect. This is particularly true when leaders of no less than five specialty organizations of medicine have voiced concurrence in this plan.

The cry remains that the cost of health care is rising out of reach of the public and care to the "disadvantaged" and the poor cannot be furnished under the present system. As a spokesman for labor, John F. Tomayko of the United Steel Workers, says, "Solo practice is out. Group practice is in." The group practice to which he refers is not the fee for service type we know but

salaried practice paid for by capitation, an example being the Kaiser Permanente groups.

The one thing upon which they all agree is that some form of compulsory, universal health "insurance" will be enacted. Not one voice can be heard to remind all that such a maneuver at this time will so overload the health care delivery system as to drive costs up, not down, and can easily cause collapse of the system.

Surely the voice of OSMA is low because of its size, but the facts are available and are documented. They will be advanced to the national forums through channels available to us. They will be given to you through the medium of *The Journal*, the *Newletter* and special communication.

In the meantime, avail yourself of every opportunity to fill in the gaps in your knowledge and understanding of this problem. You have the insight to see deficiencies in present and proposed legislation. Keep your friends and patients informed and through them your elected representatives.

In the meantime, make regular attendance at your county society and state medical association a matter of first priority.

These words would indicate that your professional life may depend on these rapidly developing events. It does.

Sincerely yours,

Harold E. Denyer



## Trauma in Children

E. IDE SMITH, M.D.

*The transport and initial emergency room diagnosis and treatment of pediatric trauma patients is an important factor in reducing mortality.*

TRAUMA IS the leading cause of death in children and certainly needs no excuse for constant concern and repeated emphasis. Among the reported causes of fatal injury in childhood motor vehicle accidents, burns and drownings are most common.<sup>1</sup> This has been mirrored in our own experience over the past two years as shown in Table I. It is estimated by Izant and Hubay<sup>2</sup> that conservatively there are over 15 million childhood injuries annually. Hospitalization of non-fatal injuries is most commonly caused by skull and other fractures and the most frequent mechanism of the injury is a fall. Among non-fatal injuries which do not require hospitalization, lacerations are, of course, seen most often followed by contusions, abrasions, fractures and dislocations.<sup>3</sup>

The treatment of trauma in children is a

From the Children's Mercy Hospital, Department of Surgery, University of Missouri School of Medicine, Kansas City, Missouri. Presented to the Oklahoma State Medical Association, Annual Meeting, Oklahoma City, May 17, 1968. Supported in part by following grants: 5641-2601 Eaton Laboratories, United Funds Board, 1966, Kansas City, Missouri.

major concern of surgeons everywhere and certainly has been a major concern of the Surgical Service of Children's Mercy Hospital. In looking over our experience in the last five years, we were surprised to find that our basic concepts of treatment have changed considerably, although we have had to learn again some of the old chestnuts of trauma surgery. It would appear also that a better job might be possible. There are five major areas worthy of discussion.

### I. Transportation and Initial Care

In reviewing the deaths which we have had from trauma and including in this study patients who were moribund, or dead on arrival, the vital importance of the initial care and transportation of the injured patient is clearly evident. One particular area of need is proper initial communication and transportation. This need exists equally for the patient referred some distance from a rural area as well as for the patient injured on the city streets. All too often the critically ill patient arrives at the hospital without any warning and too often treatment must be begun with an unnecessary ignorance of the circumstances of the accident or the history of the patient. Certainly when the patient is referred by a physician who often has some record of the accident and of the patient's past medical history, this information can be very helpful for the physician who will accept the care of the patient. Likewise, the physician who accepts such a



case by phone should recommend those things which he would like to have done for the patient in transit. The concept of a "hot line" between the fire department and the University of Maryland Hospital which was recently described by Jelenko, *et al.*,<sup>4</sup> and the 999 system which is used in Canada can be extremely helpful in facilitating care. In the initial transportation of children, analogous to the case with adults, two primary concerns should be (a) a constant awareness of the danger of death from aspiration enroute, and (b) the dangers of aggravating a cervical or spinal cord injury. Certainly, seriously ill children should be kept on a nothing-by-mouth order and there should be available equipment and personnel trained to clear the pharynx in case of vomiting. The need for trained ambulance personnel is and should be our concern.

On arrival in the emergency room the victim of acute trauma should be completely stripped and the entire body examined for injury. This is particularly relevant in the patient who has an obvious head injury. As Irving and Irving<sup>5</sup> have written so well, "The very nature of head injury is such that it tends to focus attention on itself and to demand, often unjustifiably, priority treatment. Obsession with the unconscious state may lead to superficial examination of the body and attribution of already present, or developing, physical signs to alterations in the central nervous system, rather than local damage." As a general rule it can be stated that the classical picture of hypovolemic shock, namely pallor, sweating, peripheral venous collapse and, in the decompensating case, hypotension and tachycardia is never attributable to head injury alone. Special attention should be directed therefore to the thorax, abdomen and pelvis.

In our review of trauma deaths at this hospital the importance of these observations was very clearly underscored by one patient whose death was attributed solely to a fracture of the skull, and at the time of autopsy had no pathological evidence of intracranial injury, but did have a contusion of one lung and total collapse of the other lung because of 1,100 cc's of blood and air within the pleural cavity. These findings should be constantly kept in mind. It would appear, also, that the small size of children may, indeed, lend itself to the more frequent impact of force on more than one area. The importance of associated injuries with head trauma is reaffirmed by the autopsy findings in our series (Table II). Wilson has shown in a study of 391 consecutive patients with blunt abdominal trauma (all ages) that the overall mortality was 28 percent but there was a 58 percent mortality among patients with combined cranial and abdominal injury and 15 percent in the group with abdominal injury alone.

The maintenance of respiratory function is the first concern in the child with severe trauma. We have tried to avoid emergency tracheotomy and prefer temporary endotracheal intubation when respiratory assistance or resuscitation is necessary. Tracheotomy in the younger child is not an easy procedure and unless there is a local problem with the upper airway the endotracheal tube is quickest and usually functions well. Tracheotomy has a definite role to play in the management of severe head and thoracic injuries, but in these instances it is performed as an elective procedure after 24 to 48 hours of endotracheal resuscitation. With the constant danger of aspiration and frequent finding of a gastric distention a nasogastric tube to empty the stomach of gas and fluids is inserted early in treatment.

Intravenous fluids are started in all chil-

Table 1  
DEATHS FROM TRAUMA  
Time of death after injury

Cause	Total Patients	Dead on Arrival at hospital	Died Less 24 hours	Died after 24 hours
Burns	10	2	2	6
Vehicle	10	5	3	2
Falls	10	0	1	2
Drowning	3	3	0	0
Gunshot	2	0	0	2
"Abused"	1	0	0	1



Table 2  
VEHICLE ACCIDENT DEATHS

Sex	Age	Nervous system Injury	Other Injury	Cause Death	Time Death
M	6	Skull fracture	Myocardial hemorrhage	CNS	DOA
M	2	Diffuse brain	Pericardial bleeding		
		Diffuse brain	Rupture gallbladder, duodenum, diaphragm	CNS and Abdominal	16 days
M	6	Basilar skull fracture	Fracture ribs, clavicle	CNS	7 days
M	13	Fracture skull	Disruption lung; contra. hemopneumothorax	Thorax	DOA
F	3	Cervical spine	L. pneumothorax; pneumopericardium; r. hemopneumothorax	Spine and Thorax	1 hour

dren with serious or potentially serious injuries, in anticipation of the worst. Ringer's lactate is begun at the rate of 20 to 40 ccs./kg./hour and blood replacement is given as needed as soon as it is available. Many patients also have acidosis, and 20 to 44 mEq. of sodium bicarbonate (one-half to one ampule) is given. Proper recording of fluid administration is vital particularly early in the resuscitation. The cephalic vein or the greater saphenous vein at the saphenous-femoral junction has been used recently for cut-downs in order that a central venous pressure monitor can be utilized. A point of technique, in using the saphenous vein in the child under three, it is often necessary to approach this vein at the bulb since the angle of entrance into the femoral is somewhat acute and difficult to negotiate. We have found the left cephalic vein to be easier to cannulate than the right.

## II. *Diagnosis and Treatment of Trauma in Children*

The approach to diagnosis and treatment of trauma in childhood has become more aggressive, which probably reflects an over-all aggressiveness which is everywhere apparent in trauma surgery. Hypovolemic shock and respiratory distress must be treated adequately before the patient is given an anesthetic. In the majority of cases the time allowed to "let the dust settle" and to view the total patient in perspective is well spent, particularly as far as the hidden cavities of the thorax and abdomen are concerned.

Diagnosis in the child can be very difficult and the manner in which the various age groups are handled is often important in obtaining a good history and physical examination. We have been very impressed by the as-

sistance in diagnosis which is possible if some description of the forces which were involved in the accident can be obtained. The performance of a rapid, but complete, initial "mini-examination" is a vital part of the over-all management of the trauma patient. This examination of the patient to obtain a general working orientation has been applied to the neurological examination but the concept is a very valid one in the management of any trauma patient.

Radiological examinations are also very important. The condition of the patient limits the extent, and very careful coordination is necessary between the clinical management of the patient and the diagnostic radiological studies which are done. Complete radiological examinations, beyond the scope necessary for maintenance of life at a particular time, may be unnecessary. Very early radiological examinations may be misleading in cases when free peritoneal air from perforation of the intestine or the pneumothorax following chest injury may not have had time to develop.

One recent observation has been the frequent association of occult abdominal neoplasms or congenital abnormalities, particularly the urinary tract, in cases where a major injury results from minor trauma.<sup>7</sup>

With the advent of better anesthesia and improved correction of hypovolemic shock and its accompanying acidosis, a more aggressive operative approach toward blunt abdominal trauma in the child is possible. Exploratory laparotomy for trauma should follow closely the principles of abdominal exploration for inflammatory disease. As an example, a child with possible rupture of the spleen whose clinical course remains



questionable should probably be explored early when he is in good condition, rather than waiting until he presents obvious signs and symptoms of deterioration. This premise is based on the same two assumptions which prevail in inflammatory disease in childhood; (1) the difficulty of clinical evaluation in the very young child and (2) the increased morbidity and mortality occurring with complications when they develop in the child. Even with cerebral trauma, patients withstand surgery and anesthesia well, provided there is good oxygenation and metabolic support during the operative procedure.

We have felt that routine exploration is warranted in the majority of penetrating wounds of the abdomen in children. In reviewing our experiences with 20 penetrating wounds occurring in children from birth to 15 years, it is felt that the child does not lend himself to the same selective evaluation as does the adult. There has been no experience with the technique of injection of radio-opaque material into the tract of a penetrating wound, as suggested by Cornell, *et al.*<sup>8</sup>

#### TRAUMA IN THE NEWBORN

The occurrence of surgically correctable trauma in the newborn has been emphasized recently by several reports.<sup>9, 10</sup> Cywes<sup>11</sup> reports a three percent incidence of visceral hemorrhage in an autopsy series on neonates excluding still-births. Subcapsular hematomas of the liver accounted for 63.5 percent of all intra-abdominal hemorrhages. The history of the delivery may not be complicated, but the average size of the infant is usually larger than normal. The outstanding physical signs noted are extreme pallor and shock and occasional significant abdominal distention. Radiological examination may be quite helpful in demonstrating the presence of intra-abdominal fluid. Cywes emphasizes the fact that there may be a coagulation defect present, and he believes that the external trauma to the liver and spleen may occasionally be the only precipitating factor in the hemorrhage, but more often the bleeding is out of proportion to the trauma which is simply a precipitating factor in a predis-

posed infant. In his clinical experience best results were obtained in a group of patients who were transfused and had correction of coagulation defect prior to operation.

#### ABUSED CHILDREN

The possibility of "multiple abuse" in children cannot be overlooked. Children with this syndrome have been seen at Children's Mercy Hospital who had no x-ray evidence of healing fractures and whose injuries were limited to the soft tissues or internal organs. The presence of bruises in various stages of healing, a peculiar history which defies normal physiological principles, or the presence of multiple punctate burns from the tips of cigarettes are all suggestive of this syndrome. It has been particularly difficult at times to unravel the chronology of the signs and symptoms in such patients. In one case an injury to the intestine caused by kicking the patient did not cause immediate perforation but led to delayed perforation or obstruction which was difficult to relate to the actual injury.

#### III. Treatment of Burns

The management of burns at the Children's Mercy Hospital has changed considerably during the years 1963-67 with the advent of topical therapy and the development of a specialized burn unit. An impressive finding has been the surprising similarity of burns according to their etiologies. The flame burn in childhood is so often limited to the flammable liquid or trash fire burn in the school age male and to the nightgown burn of the younger girl. Scald burns, so common in the preschool age, characteristically involved the neck, shoulder and a

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Table 3  
ETIOLOGY OF BURN BY AGE AND SEX

	Less 1			1-2			3-5			6-12			Over 12		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Flame, total 63	0	0	0	1	2	3	12	11	23	19	11	30	7	0	7
Trash, gasoline 28	0	0	0	1	1	2	5	0	5	14	4	18	3	0	3
Night gown 9	0	0	0	0	1	1	1	3	4	0	4	4	0	0	0
Miscellaneous 26	0	0	0	0	0	0	6	8	14	5	3	8	4	0	4
Liquid, scald 83	2	1	3	30	18	48	8	9	17	5	7	12	0	3	3
Water 24	0	1	1	10	0	10	2	1	3	5	3	8	0	2	2
Coffee 29	2	0	2	13	7	20	4	2	6	0	1	1	0	0	0
Grease 16	0	0	0	5	4	9	1	4	5	0	1	1	0	1	1
Immersion 14	0	0	0	2	7	9	1	2	3	0	2	2	0	0	0
Contact, misc. 22	1	3	4	6	5	11	1	3	4	1	1	2	1	0	1
	7			62			44			44			11		

portion of the trunk. Table 3 shows the etiology by age and sex of 117 burns which were admitted to the hospital in 1966-67. Basic to the new concepts of burn therapy is an understanding that the management of the major burn involves an equilibrium between the patient and his injury and that the topical agent provides only one weight in the patient's favor. Our experience has been with the topical agents Mafenide Acetate (Sulfamylon) and Furazolium Chloride (Novofur). There were six deaths in this group which are shown in Table 4. In addition to these deaths there were four children who were dead on arrival or moribund on admission to the emergency room. Two of these deaths were due to asphyxiation rather than thermal injury.

There was a mean of 2.2 days of hospitalization per percent body surface major burn. Forty-five percent of the patients required skin grafting; 19 percent of liquid burns, 65 percent of flame burns, and 65 percent of contact burns admitted. The burns were managed with the application of topical medication twice daily and with intensive and daily hydrotherapy. No dressings of any sort were employed. The regimen employed was patterned after that developed at Brooke Army Hospital.<sup>12</sup>

In patients with major burns, debridement under anesthesia was often carried out at about 14 days and the initial grafting was done in most cases between 21 and 28 days post-burn. Homografting was employed on large burns taken from parent donors or from cadavers. Tanner mesh grafts were

used to cover large areas when only small donor areas were available.<sup>13</sup> One observation which was made was the importance of placing life over function in the large burn. Adequate support for the patient with frequent transfusions and tube feeding is felt to be very important.

Considerable credit must be given to the personnel who worked in the burn unit and to the enthusiasm and work of the nursing and ancillary personnel which are every bit as important as any medication or surgery.

IV. *Treatment of Minor Trauma*

We have felt that the management of minor surgical trauma in children can be greatly improved, judging from our own experiences. The problems in treating many lacerations are obvious and yet the necessity for proper care of cosmetic and functionally important injuries in children is self-evident. In general, there would appear to be a tendency to attempt too meticulous a closure of some injuries of the trunk and extremities which might be better left open or sutured extremely loosely. Wound infections are very frequent in lacerations in children with impetigo or overt streptococcal infection. It has been noted that these children will often develop infections in lacerations in areas remote from the cutaneous infection.

Adequate sedation and local anesthesia in children with minor lacerations and without intracranial injuries can also improve care. Although there is little doubt that a "few" sutures can be placed in a laceration without anesthesia, it is a fact that a dentist



rarely fills a cavity today without employing an agent to eliminate the pain. It is suggested that the long range effects of the procedure on the child is also improved through the use of sedation and adequate local anesthesia.

#### V. Accident Prevention

The surgeon can play an important role in accident prevention and trauma in children. Two obvious questions are often raised; is it the responsibility of the surgeon to concern himself with accident prevention and if so, what can he do? The surgeon cannot escape the fact that he uniquely has the confidence of the patient and is in a position to make his opinion felt. There is much that can be learned about accident prevention. Although multiple factors set the stage for accidents to occur, no injury takes place without the occurrence of one or more of a number of abnormal energy exchanges in which the amount or rate of application exceeds the corresponding local body tolerance. A concept of the possibility of altering the impact of the agent upon the individual is an important one in accident prevention.

It should also be the obligation of the physician to do what can be done to prevent a recurrence of the same injury which he treats. As in the elderly, there should also

be awareness that the accident may be the result of some organic or emotional problem. The possibility, for example, should always be kept in mind that the child may have had some type of seizure prior to a fall.

#### CONCLUSION

On the basis of our clinical experiences with trauma in children we would suggest the following five areas for continuing efforts and improvement:

(1) Initial care and transportation of trauma patients.

(2) While frantic haste and aggressiveness in the management of trauma is unwarranted, early and more definite surgery can result in less morbidity and disability.

(3) Burns can be treated with greater success and with more vigor and topical therapy appears to present a definite improvement.

(4) Minor surgery in children can be better handled with more concern to the long range effects of the children's appearance, function and emotions.

(5) Accident prevention is vital and is the physician's responsibility.

#### ACKNOWLEDGMENT

We wish to acknowledge the provision of drugs used to Norwich Pharmacy (Furazol-

Table 4  
DEATHS FROM THERMAL INJURIES

Age	Sex	% Burned	Etiology	Days Survived Post Burn	Complications
3 yrs.	M	88%	Flame	4 days	Pulmonary insufficiency Cardiac Arrest
2 yrs.	F	46%	Immersion (Scald)	9 days	E. coli septicemia Pulmonary edema Early bronchopneumonia
3 yrs.	F	20%	Immersion (Scald)	7 days	Curling's Ulcer Cardiac arrest Cardiac insufficiency
8 yrs.	F	51%	Flame	32 days	Pseudomonas Septicemia Curling's Ulcer
14 yrs.	M	75%	Flame	8 days	Pseudomonas Septicemia Pulmonary insufficiency
2 yrs.	F	80%	Flame	2 days	Hypothermia Nephrosis Atelectasis



ium Chloride) and Sterling-Winthrop Laboratories (Mafenide Acetate). □

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# How Accurate Is Cytology?

JAMES K. BOYD, M.D.

*While all doctors are familiar with cytology, do you have a clear idea of what kind of accuracy you should expect from a cytology examination?*

## MATERIALS AND METHODS

**A** FIRST CLASS apochromatic binocular Bausch and Lomb microscope was used in all examinations. All smears were stained with Ortho Papanicolaou smear stains. Harris hematoxylin and eosin Y were used on the tissue examinations. Nearly all smears were fixed in 99 percent isopropyl alcohol while tissues were fixed in formaldehyde.

A copy of all 44,227 cases is kept in the regular files, and an extra copy of all positive and suspicious cases is kept in a special file.

The Ayre cell scraper was used in making the smears in nearly all cases. This report will be concerned only with uterine cytology.

For the purpose of checking the cytology, the tissue examinations are considered to be 100 percent accurate. This is, of course, not entirely true as shown by the study by Holmquist.<sup>1</sup> Several biopsies were sometimes necessary.

I read all of the cytology and about ten percent of the tissue examinations. About 90 percent of the tissue examinations were read by numerous other pathologists. This effectively removes any possibility of bias on my part as to the accuracy of the cytology, as checked by tissue examination.

## POSITIVE CYTOLOGY

Ninety-eight cases were called positive on cytology examination (positive in this paper means malignant) and diagnosed as carcinoma in situ or invasive carcinoma on cytology. Ninety-two of these were confirmed as carcinoma on the tissue examination. This is an accuracy of 93.8 percent on all cases called positive on cytology.

Of the six cases called positive on the smears, but considered short of carcinoma on tissue examination, all showed tissue changes of dyskaryosis and basal cell hyper-



plasia. Many authorities believe dyskaryosis and basal cell hyperplasia are premalignant with some possibility of reversal.

The number of cases of carcinoma of the uterus as stated by Hartford<sup>2</sup> is three to six per 1,000 cases. In this study the number found is 3.48 per 1,000 cases.

SUSPICIOUS OR DOUBTFUL CASES

Ninety-two cases were called suspicious on cytology. Of these, 55 cases, or more than half showed a carcinoma on the tissue examination. This is 60 percent. Of the 37 cases in this group considered short of carcinoma on the tissue examination, 15 had abnormal changes in the tissues such as dyskaryosis and basal cell hyperplasia.

THE CYTOLOGIC DIFFERENTIAL  
DIAGNOSIS OF CARCINOMA IN SITU  
AND INVASIVE CARCINOMA

Since I use the Ayre classification,<sup>3</sup> I have always tried to determine whether a positive cytology was carcinoma in situ or invasive, purely from the cytological study and before the tissue examination was done.

I also use the classification of Ruth Graham<sup>4</sup> on the general practice forms since many general practitioners use these forms. This is simply positive, suspicious, or negative.

In the cytologic determination of squamous carcinoma in situ I find (1) small clusters of tumor cells, along with small clusters of pre-cancer cells mixed in with many normal cells; (2) many free nuclei that have lost their cytoplasm in in situ lesions; (3) if blood is present, it is usually fresh blood.

In invasive lesions (1) there are large clusters or sheets of tumor cells with not so many normal cells; (2) these tumor cells keep their cytoplasm; (3) there is apt to be old blood and fibrin on the slides. One also develops a "feel" for this sort of thing.

CASES CALLED CARCINOMA  
IN SITU ON CYTOLOGY

Forty-nine smears were called carcinoma in situ on cytology, and 44 cases proved to be carcinoma in situ on tissue examination. Five of the 49 cases called in situ were in-

vasive. This is an accuracy of 89.7 percent in distinguishing between in situ and invasion cytologically.

CASES CALLED INVASIVE ON CYTOLOGY

Sixteen cases were called invasive on cytology and 15 cases proved to be invasive on tissue examination. One case was in situ. This is an accuracy of 93.6 percent in distinguishing between these two cytologically.

CASES CALLED CARCINOMA  
IN SITU ON CYTOLOGY WITH  
POSSIBILITY OF INVASION

When cytology shows carcinoma in situ with possibility of invasion, one has already admitted he can't tell for sure about invasion, so no attempt will be made to determine this accuracy. However 24 cases were called carcinoma in situ with possibility of invasion. Twelve cases had invasion on the tissue examination. (Accuracy of 50 percent.)

ADENOCARCINOMA

Of the 153 cases of positive and doubtful cytology found and confirmed by tissue examination, 12 were adenocarcinoma. There were three adenocarcinomas of the cervix, two of the endocervix, two of the cervical canal, and four of the endometrium. Probably those of the cervix and endocervix should be lumped together for a total of five and those of the canal and endometrium together for a total of six since they most likely started in these areas.

This gives close (3.26 percent) to the accepted three percent for adenocarcinoma of the cervix. The incidence of endometrial lesions is also about what one would expect; 2.86 percent.

One case was an adenocarcinoma of the ovary. This was detected on cytology but it is rare that tumor cells travel the great distance through the tubes and uterus to be found in the cervical mucous.

COMPARATIVE CYTOLOGICAL ACCURACY  
OF SQUAMOUS AND ADENOCARCINOMA

The accuracy of detection of adenocarci-



noma of the cervix is about the same as in squamous carcinoma since the lesion can be reached equally well with the Ayre cell scraper. However, detection of adenocarcinoma of the canal and endometrium is more difficult since this area cannot be reached with the cell scraper. The cells do not always come through with the blood if there is spotting and bleeding and if they do and are caught in the cervical mucus, patients frequently wash them away with a douche before coming in to be examined.

In the four cases of adenocarcinoma of the endometrium, two were detected on cytology and two were missed until a cone and D. and C. had been done. This cytological accuracy for adenocarcinoma of the endometrium is therefore only 50 percent, as compared to an accuracy of 93.8 percent in squamous carcinoma of the cervix called positive on cytology. One should bear in mind that the sample of adenocarcinoma is small, however.

#### CASES NOT DETECTED ON CYTOLOGY, BUT WHICH SHOWED CARCINOMA ON THE TISSUE EXAMINATION

Seven cases were not detected on cytology examination in the 44,227 cases. One was complicated by trichomonas. One was suspected at first of being granuloma inguinale. One showed a uniform hyperplasia without anaplasia. One was in the canal and probably not reached by the cell scraper. Two were adenocarcinoma of the endometrium with no gland cells present on the smears.

#### PREGNANCY

In pregnant women there may be false lesions in the cervix which on both cytology and tissue examinations look exactly like carcinoma in situ. The best way to handle these is to repeat smears until three months after delivery. If the abnormal cells are then gone, it was only a false lesion of pregnancy. If the abnormal cells are still pres-

ent, then a cone and D. and C. should be done to confirm the diagnosis.

If the smears are strongly positive, a quadrant biopsy of the cervix or a cone should be done. If the lesion is in situ, one can safely wait until after delivery for treatment. In invasive lesions, treatment should begin at once no matter what the stage of gestation. Others have expressed the same opinion.<sup>5, 6</sup>

#### BENIGN ATYPICAL GLANDULAR HYPERPLASIA

One other condition has been seen more and more often lately. This is benign atypical glandular hyperplasia of the cervix which mimics adenocarcinoma of the cervix or canal. It is thought to be due to the use of birth control pills. This lesion is often seen in young women and has caused a false tissue diagnosis of adenocarcinoma of the cervix in some cases over the country.

#### AGE OF PATIENTS WITH UTERINE CARCINOMA

The average age of patients with squamous carcinoma of the cervix at the time of detection is 41 years in this study.

Adenocarcinoma of the cervix seems to occur at any age and adenocarcinoma of the endometrium at over 50 years of age.

Ferguson<sup>7</sup> has reported on cases of carcinoma of the cervix in girls under 19 years of age. In this study only four women of 153 with both positive smears and carcinoma on the tissues were under the age of 30. The youngest was 27 years of age.

#### TIME INVOLVED IN CARCINOMA OF THE CERVIX

Squamous carcinoma of the cervix appears to go through a pre-cancerous stage of one to ten years and a stage of carcinoma

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*A graduate of the University of Tennessee College of Medicine, James K. Boyd, M.D., limits his practice to his specialty, pathology. A member of the Southern Medical Association, Doctor Boyd is in private practice in Tulsa, Oklahoma.*



in situ for one to five years. The progress of invasive carcinoma is probably much more rapid.

#### TRICHOMONAS AND MONILIA

The two commonest infections of the cervix and vagina are trichomonas and monilia. Trichomonas is about five times as common as monilia. Trichomonas is usually easy to find on a smear while monilia is much harder to find as a rule and requires a prolonged search. A culture may have to be resorted to. Both are subject to recurrence.

The importance of trichomonas or monilia in malignancy is that while the infection is usually easy to distinguish from a malignancy, this is not always so. Occasionally trichomonas in particular and sometimes monilia will cause a degree of hyperplasia and anaplasia which produce cells with large dark nuclei. The best way to handle this problem is to first treat the infection and then make a smear six weeks later. If the inflammation is then gone and the nuclear anaplasia is still present, a quadrant biopsy or cone and D. and C. will be necessary.

I have seen four cases of trichomonas and malignancy in the same patient at the same time. I have seen only one case of trichomonas and monilia together in the same patient at the same time.

#### THE MAKING OF CERVICAL SMEARS

The best way to make a smear today is with a wooden Ayre cell scraper. This is run around the entire circumference of the squamo-columnar line of the cervix where most malignancies start. All of the mucous and cells that are convenient are then spread on two-thirds of a single slide. The remaining mucous and cells on the scraper are spread on a second slide. The second slide may be made with a second scraping if desired, but this usually results in a bloody slide.

If one does not like the looks of the endocervical gland cells, the second slide may be made from this area. If there is blood in the os (other than menstrual blood), the second smear should be made from this blood and the endocervix.

I see no reason to make a smear from the

vagina. Squamous carcinoma of the cervix almost always starts at the squamo-columnar line of the cervix. In endometrial lesions the cells will be in the cervical mucous. Primary carcinoma of the vagina is almost unknown. Only in the case of target lesions should vaginal smears be made.

#### FIXATION

Cervical smears should be fixed immediately. Commercial isopropyl alcohol (95 to 99 percent) is a very satisfactory fixative. Fixing for one hour is long enough, but the smears can remain for several days without harm.

Half-and-half ethyl alcohol and diethyl ether is good as is half-and-half isopropyl alcohol and petroleum ether. Ethyl alcohol (95 percent) is also satisfactory. Formaldehyde must not be used since cytoplasm does not stain well with the Papanicolaou smear stains. "Spray-on" type fixatives may be used.

#### MAILING OF SMEARS

Cervical smears lend themselves very well to mailing for examination. The smear should be fixed for an hour in isopropyl alcohol or other fixative and then a few drops of glycerin should be placed on the wet smear and the smear then covered with a clean slide to form a sandwich. There is no harm to the cells (for one week) if this method is used.

#### SUMMARY

A total of 44,227 cervical smears were examined over a period of ten years.

One hundred and ninety cases showed malignant or suspicious cells on cytological examination. One hundred and fifty-three of these cases were confirmed as malignant on tissue examination.

Of 98 positive smears, 92 had carcinoma of the uterus on tissue examination (accuracy of 93.8 percent). The other six cases showed dyskaryosis or basal cell hyperplasia.

Ninety-two smears were called suspicious and 55 of these cases had carcinoma of the



uterus on tissue examination (accuracy of 60 percent).

An attempt was made to differentiate between carcinoma in situ and invasive carcinoma on the smears before tissue examination had been done. Forty-nine cases were called carcinoma in situ on the smears. Forty-four of these cases had carcinoma in situ on the tissue examination (accuracy of 89.7 percent). The remaining five cases all had invasive carcinoma. □

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# University of Oklahoma Medical Center POSTGRADUATE SHORT COURSE EAR, NOSE AND THROAT PROBLEMS IN OFFICE PRACTICE

Wednesday, December 10th, 1969

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ROBERT S. ELLIS, M.D.  
Clinical Associate Professor  
Department of Medicine

11:30 A.M. Registration and Lunch — Faculty House

Presiding:

James B. Snow, Jr., M.D.

12:30 P.M. Active Otitis Media and its Sequellae  
Roger E. Wehrs, M.D.

1:15 P.M. Current Treatment of Allergic Rhinitis and Sinusitis  
Robert S. Ellis, M.D.

2:00 P.M. Hearing Problems of the School Child  
Gerald A. Studebaker, Ph.D.

2:45 P.M. Speech Problems of the School Child  
John L. Boland, Jr., Ph.D.

3:30 P.M. Current Trends in the Tonsil and Tonsil and Adenoid Problem  
James B. Snow, Jr., M.D.

4:00 P.M. Evaluation of Hoarseness  
Willard B. Moran, Jr., M.D.



# Di Guglielmo's Disease: Its Diagnosis and Natural History

CHARLES W. SEWARD, M.D.

*Di Guglielmo's disease, a myeloproliferative disorder characterized by erythroblastosis, has a natural history lending itself to late diagnosis. It has been related to certain genetic abnormalities.*

## INTRODUCTION

**GIOVANNI** di Guglielmo first described a pathologic entity of the hematopoietic tissue which he defined as a primary autonomous illness characterized by a generalized proliferation of erythropoietic tissue.<sup>7</sup> Subsequently the disease and all its manifestations have been included in a greater order of diseases generally termed myeloproliferative disorders which include polycythemia vera, myelofibrosis with myeloid metaplasia, thrombocythemia and acute and chronic granulocytic leukemia.<sup>2, 3, 4</sup>

As Dameshek has pointed out, the scarcity of cases and prolific literature on the disease has lead to a multiplicity of terms<sup>5</sup> and a brief discussion here will acquaint one with the hematological terms used in dis-

cussing the disorder. Various authors<sup>3, 6, 7, 8</sup> have associated Di Guglielmo's disease with terms such as erythremic myelosis and acute erythremia. Di Guglielmo<sup>1</sup> himself applied the terms erythroleukemia and erythroleukopiasrinemia. The differences between the erythremia and erythroleukemia become obvious on consulting the chart by Martin and Bayrd<sup>8</sup> (Figure 1).

It is the morphologic definition of Di Guglielmo's disease that is descriptive of the peripheral blood, bone marrow and sites of hematopoietic synthesis. Thus to clarify the point of definition, consider the following differential morphologic points:

1) Peripheral blood contains a high percentage of prereticular red cells, multinucleated, macrocytic and atypical in appearance with a basophilic cytoplasm noted in acute erythremia. In erythroleukemia one sees a similar macrocytic anemia in the blood with many red cells as described above but in addition to a marked left shift of the granulocytic series with considerable numbers of immature neutrophils being present.<sup>1, 2, 9, 10, 11</sup>

2) In erythremia, the bone marrow is hyperplastic with a decrease of the granulocyte: red cell ratio which normally approaches one. Decreased or absent megakaryocytes and lymphocytes are notable. Erythroleukemia carries the stigmata of a hyperplastic marrow with rubriblastic mon-

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## PRIMITIVE RETICULUM CELL

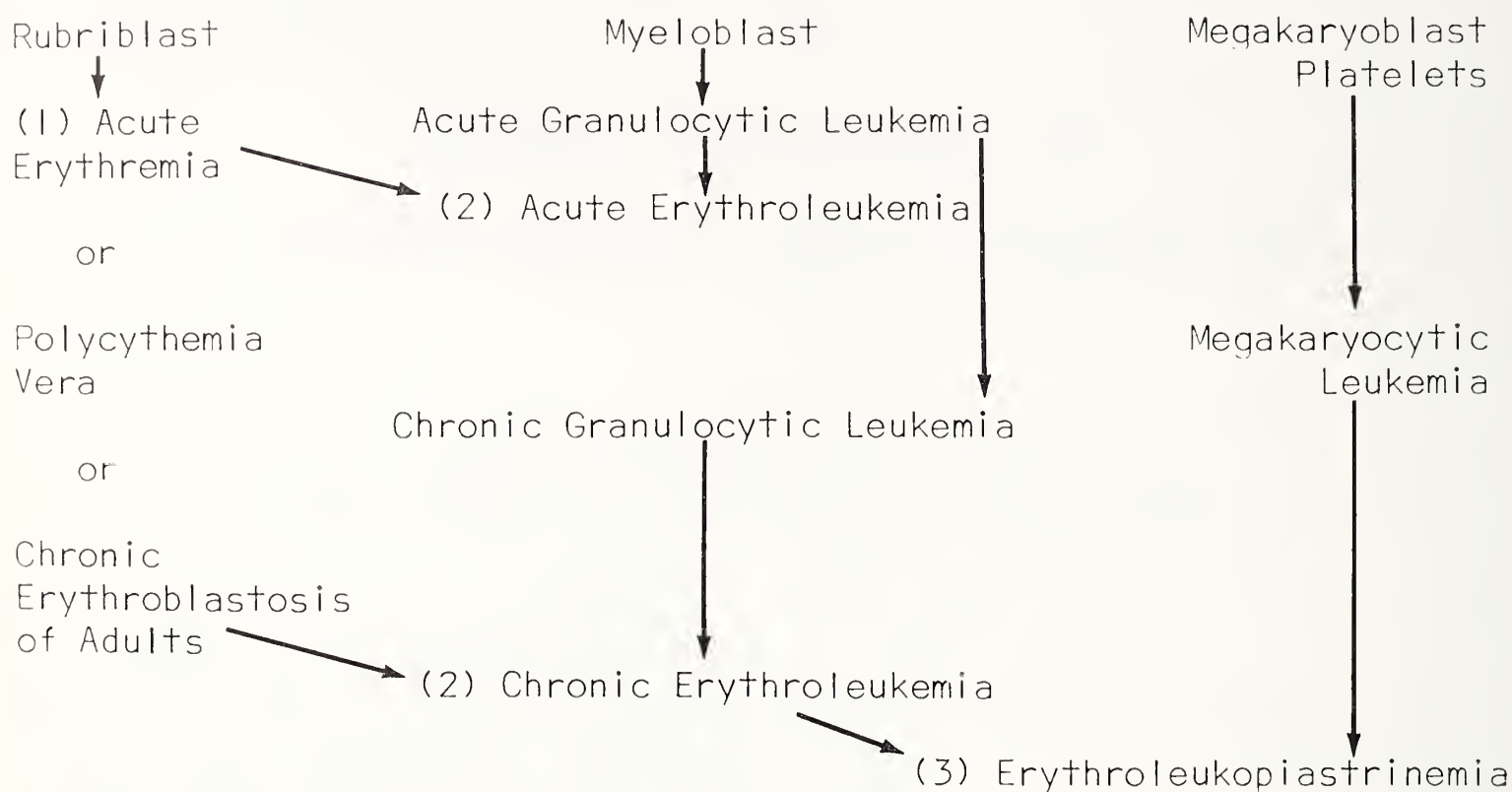


Figure 1. Numbers () refer to the stages of Dameshek and others.<sup>2</sup> Adapted from and used by permission of Martin, William J. and Bayrd, Edwin D. Erythroleukemia with Special Emphasis on the Acute and Incomplete Variety. *Blood*, 9: 321-339, 1954.

strosities such as gigantic, polyploid or multinucleated cells exceeding 18-24 microns accompanied by a marked overgrowth of promyelocytes, myeloblasts and stem cells.<sup>1,2, 9, 10</sup> Dameshek has combined these criteria into the following bone marrow parameters:

- 1) Hypercellularity.
  - 2) Proliferation of erythroblasts comprising as much as 90 percent of marrow cells.
  - 3) Inversion of the leuko-erythroblastic ratio which in most of the cases is less than one.
  - 4) Maturation arrest of the erythroblasts.
  - 5) Abnormalities of the erythroblasts such as gigantism, polyploidism and neoplastiform monstrosities.
- 3) The gross anatomic criteria at autopsy are characterized by hematopoietic tissue islands scattered throughout the pleura, small bowel wall, liver, kidney, spleen and lymph nodes in both erythremia and erythroleukemia. This tissue may be purely myeloid or erythroid or a mixture of both<sup>1, 2, 9, 10</sup>

depending on the manifestation reflected by the peripheral blood.

A comparison of findings of Di Guglielmo's disease with those of the other myeloproliferative disorders might be helpful at this point (Figure 2).

It is now considered that the findings of Di Guglielmo occur in at least three stages of increasing leukemic severity listed by Dameshek<sup>2</sup> and Sheets<sup>11</sup> as:

- 1) Erythremic myelosis (see morphologic bone marrow description of erythremia).
- 2) Erythroleukemia (see morphologic bone marrow description of erythroleukemia).
- 3) Acute myeloblastic leukemia.

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TABLE OF COMPARISON OF  
MYELOPROLIFERATIVE DISORDERS

RBC	WBC	MEGAKARYOCYTES PLATELETS	RETICULAF CELLS	POTENTIAL METAPLASTIC BONE MARROW
Polycythemia Vera				
+++	++	++ (+)	+	+
Myelosclerosis with Myeloid Metaplasia				
-	+(+)	++ (+)	+++	+++
Chronic Granulocytic Leukemia				
+	+++	++	+	+
Thrombocythemia				
+	+	+++	+	+
Di Guglielmo's Disease				
++ (+)	+++	+	-	-
Acute Granulocytic Leukemia				
-	++	-	-	-

Figure 2. Adapted from and used by permission of Dameshek, William and Gunz, Frederick. Leukemia. Grune & Stratton, Inc., p. 357, 1958.

DIAGNOSIS

There are certain consistent physical and historical data in any patient with Di Guglielmo's disease: (1) Sex—two males to one female; (2) Age—neonate to 80's; (3) Nationality—virtually all have been reported and (4) Race—Caucasian.<sup>12</sup> There is a rather consistent complaint of fatigue, malaise, weakness, weight loss (mild) and dyspnea on exertion (typical of the anemic state). Somewhat less frequently there is a recent history of purpuric rash and mucosal bleeding (associated with thrombocytopenia) and intermittent fever spiking (seen in many leukemias). Generally the history dates back three to six months to the onset of symptoms.<sup>2, 3, 13</sup>

The physical examination generally reveals a chronically ill, pale individual, sometimes with mild jaundice and often with a heart murmur compatible with the anemic state. There most often appears a splenomegaly more remarkable than the hepatomegaly. There may be purpura, ecchymoses, gingival bleeding or guaiac positive stool. Generalized weakness is obvious.<sup>2, 3, 13, 14</sup> These symptoms and history are certainly not specific for Di Guglielmo's syndrome.

A thorough discussion of differential laboratory data will be given to familiarize the reader with the differential diagnoses most often encountered in the presenting of Di

Guglielmo's disease. The screening blood count will reveal a hemoglobin of five to 10 grams percent, an average WBC of 2,000 to 4,000 cu. mm. and a low normal or reduced platelet count. Morphologically there will appear to be a macrocytic, normochromic (hypochromic to hyperchromic reported) anemia with anisocytosis, poikilocytosis and erythroblastosis; the reticulocyte count will be one to two percent; the indirect bilirubin will be one to two mgm.%.<sup>2, 12, 13, 14, 15</sup>

The differential considerations at this point are: (1) acute hemolytic anemia, (2) pernicious anemia or (3) Di Guglielmo's disease.<sup>2, 6, 15</sup>

The Coombs direct and indirect tests are negative; the Schilling test is low normal and serum B<sub>12</sub> will be high normal or normal. The jaundice does not acutely increase in severity at this stage. A chromium<sup>51</sup> study reveals normal to slightly shortened red cell life span without excessive splenic sequestration. If a trial of B<sub>12</sub> or folic acid is used, the anemia will be notably unresponsive to these agents<sup>2, 3, 5, 12, 13</sup> (Figure 3).

Since the Coombs test is negative, the role of intravascular hemolysis is questioned. The jaundice is best explained on the basis of intramarrow hemolysis of the rubriblastic monstrosities with an additional process of heme diversion. It is through heme diversion that the polychromasia appears in the rubri-

<u>ACUTE HEMOLYTIC ANEMIA</u>		<u>DI GUGLIELMO'S DISEASE</u>	
Coombs: Positive		Coombs: Negative	
Cr 51: Decreased RBC life span		Cr 51: Normal to slightly decreased life span	
<u>PERNICIOUS ANEMIA</u>		<u>DI GUGLIELMO'S DISEASE</u>	
Macrocytic anemia		Macrocytic anemia	
Megaloblastic marrow		Megaloblastic marrow	
Intrinsic RBC defect		Intrinsic RBC defect	
Heme diversion		Probable heme diversion	
Ineffective erythropoiesis		Ineffective erythropoiesis	
Serum B <sub>12</sub> low		Serum B <sub>12</sub> high or normal	
Response to B <sub>12</sub> <sup>++++</sup>		Response to B <sub>12</sub> <sup>-</sup>	
<u>CONCLUSION</u>		<u>CONCLUSION</u>	
B <sub>12</sub> deficiency		Questionable self replicating proliferation? Uptake of B <sub>12</sub> impaired?	
↓		Utilization	
Metabolic defect			
↓			
Megaloblastosis and macrocytic anemia		Megaloblastosis and macrocytic anemia	

Figure 3. Adapted from and used by permission of Dameshek, William. Proceedings of the Seventh Congress of the International Society of Hematology. v. 7, pt. 1: 265-275, 1958. Grune & Stratton, Inc.



cytic series and thus appear the defective red cells seen in the bone marrow of the patient.

This gives rise to two questions: (1) What is heme diversion? (2) What is the defect of heme synthesis of Di Guglielmo's disease? Heme diversion is discussed by Baldini, *et al.*,<sup>13</sup> and Albulba, *et al.*,<sup>14</sup> in conjunction with hemolysis as a mechanism for anemia in the absence of marked blood loss and jaundice. Both of these groups agreed there was increased hemolysis, primarily in the bone marrow prior to corpuscular release into the peripheral circulation.<sup>14</sup> Further, Baldini, *et al.*,<sup>13</sup> felt this was an intracorpuscular defect manifested by the anisocytosis and the heterogeneity of the osmotic fragility curve of the red cells. The heme diversion then is marked by the fact that the hemoglobin involved was never in the peripheral circulation. Furthermore there is an excretion of pyrrole pigments (portions of incompletely synthesized hemoglobin) released in vivo by methods other than intravascular hemolysis from immature red cells. Baldini, *et al.*,<sup>13</sup> also felt that the increased fecal urobilinogen in Di Guglielmo's disease supported the heme diversion hypothesis.

Referring to Figure 3, the conclusion is reached that there is a B<sub>12</sub> or folic acid block in the myeloid rubrocyte precursors. Baldini, *et al.*,<sup>13</sup> and Dameshek<sup>6</sup> have hypothesized such a block; Baldini, *et al.*,<sup>13</sup> inferring that this block may be the reason for an inordinate rise in pyrrole pigment without complete hemoglobin synthesis.

A more definitive laboratory test claimed by Sheets,<sup>11</sup> DeGruchy<sup>9</sup> and Baldini, *et al.*,<sup>13</sup> is a Periodic Acid Schiff (PAS) stain of the bone marrow. In Di Guglielmo's disease the erythroblasts take a strongly positive stain and do not do so in acute hemolytic anemia or pernicious anemia. Occasionally Cooley's anemia will show a mild positive PAS stain. The PAS stain is one of the more useful differentiating tests in establishing the diagnosis of Di Guglielmo's disease.<sup>9</sup>

In summary, the patient with Di Guglielmo's disease will present with anemia and pallor, fatigability and dyspnea on exertion. The laboratory tests will lead to a bone marrow biopsy for definitive evidence and a

marked erythroid proliferation in the rubriblastic series will be seen. A PAS stain of the marrow will be strongly positive in the marrow erythroblasts, establishing the diagnosis of Di Guglielmo's disease in the absence of an intravascular hemolytic process.

#### NATURAL HISTORY

In discussing the diagnosis of Di Guglielmo's disease, the essential points in the natural history have been covered. Up to the time of presentation for diagnosis the patient has generally had a three to six months course of weakness, dyspnea on exertion, pallor and oftentimes minor bleeding episodes.<sup>13</sup>

Initially these patients are generally diagnosed as having hemolytic anemia or pernicious anemia. Glucocorticoid treatment or B<sub>12</sub> and folic acid injections cause no remission and the clinician reviews his data in a quandary.<sup>6</sup> The erythroblastosis often gives way to a mixed erythroleukoblastosis or mixed myeloproliferative disorder appearing much like granulocytic leukemia.

At this stage infection or hemorrhage may interfere in the natural history, causing the demise of the patient. Antimetabolic drugs, glucocorticoids and crude liver extract are often of no avail in establishing a remission of the anemia and leukocytosis. Occasionally a case will progress from the erythroleukemic stage to erythroleukopiasrinemia with megakaryoblastic changes in the bone marrow<sup>7, 15</sup> and subsequent platelet dysfunction.

The prognosis is grave and death ensues 12 months or less after the initial symptoms and six months or less after diagnosis.

#### PEDIATRIC APPLICATION

Di Guglielmo's disease, from its inception, has been closely linked with pediatrics. In 1926, Giovanni di Guglielmo<sup>1</sup> described a case of acute erythremia with erythroblastosis and jaundice in a newborn. Several years later it was recognized that this, one of the original cases of Di Guglielmo's disease, was erythroblastosis fetalis and attributed to ABO incompatibility. Wegelius and Pelfonen<sup>16</sup> subsequently reported a case of Di Guglielmo's disease in an infant who ran



# CHROMOSOME GROUPS

A	B	C	D	E	F	G
1-3	4-5	6-12	13-15	16-18	19-20	21-22

96% of bone marrow cells of cases showed C group trisomy of metacentric figures, therefore felt to involve both granulocytic and erythrocytic series.

## 15/21 TRANSLOCATION AND MYELOPROLIFERATIVE AFFECTATION



- Affected female not studied
- H.V.F. one of reported cases
- J.L.F. other of reported cases

Figure 4. Adapted from and used by permission of Behrman, R. D., Sigler, A. T. and Patchefsky, A. S. Abnormal Hematopoieses in Mongolism. Journal of Pediatrics, 68: 569-577, 1966.

an atypical 19 months' course but had all the other earmarks of this disease. Hedenstrom and Soderstrom<sup>17</sup> reported a well documented case in a 14-year-old female which is undoubtedly Di Guglielmo's disease. These reports spanned the first two decades of the diagnosed cases of Di Guglielmo.

Although in the survey of Sheets, *et al.*,<sup>11</sup> Di Guglielmo's disease comprised only one percent of the leukemias diagnosed, it holds an important position in its relationship to the other myeloproliferative disorders. It is a definite link between the leukemias and polycythemia rubra vera and accounts for the bizarre anemias with erythroblastosis which baffled clinicians for so long.<sup>18 19</sup>

One brief word in closing should be said about recent relationships of Di Guglielmo's disease with genetic anomalies. Among the myeloproliferative disorders, chronic granulocytic leukemia has been associated with the Ph' or Philadelphia chromosome.<sup>4</sup> Two recent articles have suggested further evidence of the role of genetics in this and other myeloproliferative diseases.

Winkelstein, *et al.*,<sup>4</sup> cited the case of a 77-year-old white female who died with an erythroblastic anemia with hypercellular marrow, thrombocytopenia and myeloid immaturity. A karyotype revealed a group C trisomy, thought to be trisomy of chromosomes six or seven (typing from bone marrow cells). (Figure 4)

Behrman, *et al.*,<sup>5</sup> cited the case of two siblings of the same mother with different fathers who each had 15/21 translocation and mongolism. Each died with a macrocytic anemia and autopsy findings of scattered active hematopoietic tissue (liver, small intestine and myocardium) were suggestive of Di Guglielmo's disease. They concluded that this did not implicate a genetic locus but could be indirect in causality (Figure 4).

## SUMMARY

Di Guglielmo's disease is a neoplastiform disease of the hematopoietic tissue which, as a myeloproliferative disorder, is a diagnostic entity which does not include granulocytic leukemia or polycythemia vera.

Erythroblastoses involve infant, adult, and senescent age groups. Interesting developments in the characterization and recent genetic findings leave room for conjecture about the etiology of these diseases. Excluding erythroblastosis fetalis, Di Guglielmo's disease is the most important disease to be associated with erythroblastosis. □

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# Visceral Larva Migrans, A Review

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*Although visceral larva migrans was originally thought to be relatively rare, and confined to more tropical regions, it is now conceivable that many persons living in temperate climates harbor a few Toxocara canis larvae within their tissues.*

**V**ISCERAL LARVA MIGRANS (VLM) is a disorder which occurs most frequently in children between one and three years of age. It is characterized by hypereosinophilia, hepatomegaly, fever, transient pulmonary infiltrates and hypergammaglobulinemia. The illness varies in duration and severity, but usually lasts for several months and is not life threatening.<sup>1-21</sup> Marked respiratory distress may occur, however, and several fatalities have been reported.<sup>1-3</sup> VLM was not the only disease present in these fatal cases, but it was nevertheless felt to have contributed significantly to each death. The hypereosinophilia is often striking, and absolute counts of 10,000 to 20,000 eosinophiles per cubic millimeter do occur. Hypereosinophilia may persist for months or even years after

the disappearance of other signs and symptoms of the disease. While the best known causative agent is the larva of the common dog roundworm, *Toxocara canis*, other closely related parasites can infect humans in a similar manner. The syndrome is also referred to as "larval granulomatosis" or "Toxocarosis."

Although the symptom complex comprising VLM had been recognized for a number of years, the etiology of the disorder remained obscure until 1952, when Beaver<sup>4</sup> described three cases with positive identification of *T. canis* larvae within hepatic lesions. Beaver's classic paper was apparently stimulated by a series of reports<sup>5-9</sup> which had appeared in the literature between 1947 and 1951. In these reports, the illnesses of numerous children were described under various names, including "allergic granulomatosis," "chronic eosinophilia," "eosinophilia-hepatomegaly" and so forth. In several instances, larvae were found within hepatic granulomata, but were either not identified, or were thought to be *Ascaris lumbricoides* larvae because of the presence of adult forms of the latter in the intestine. The signs and symptoms in all of these children were similar, and very much resembled those listed above for VLM. Furthermore, Beaver reviewed the microscopic sections from several of these cases, and was able to positive-



ly rule out *Ascaris lumbricoides*, and to tentatively identify the invading larvae as those of *T. canis*.

*T. canis* larvae may also lodge in the eye, producing an endophthalmitis.<sup>22-27</sup> These lesions were diagnosed as Coats' disease or pseudoglioma until 1950, when Wilder<sup>22</sup> re-sectioned 46 such eyes from the files of the Armed Forces Institute of Pathology and found nematode larvae or their capsules in 24 of the 46 eyes. Although parasites could not be demonstrated in the remaining 22 eyes, the nature of the inflammatory reaction suggested a similar pathogenesis. The parasites were thought to be third-stage hookworm larvae, and the fact that over 2,300 serial sections were required to demonstrate the offender in one instance illustrates the magnitude of the achievement. Even though children between three and nine years of age were most commonly affected, the eyes from several adults were included in the series. The presenting symptom was a decrease in vision, or the observation by the parent of a white pupillary reflex. The ophthalmoscopic appearance of the lesion frequently suggested retinoblastoma, leading to enucleation. Most of these patients had neither hypereosinophilia, nor a history compatible with previous VLM. In 1956, five of the sections from Wilder's cases were reviewed by Nichols<sup>28</sup> after the work of Beaver and others had implicated *T. canis* as the etiologic agent in VLM. Four of the five larvae examined were positively identified as those of *T. canis*. Subsequently, Ashton<sup>23</sup> re-sectioned the eyes which had been enucleated in four English children with Coats' disease or endophthalmitis. A *T. canis* larva was found in each of the four eyes. Similar cases have been reported by others.<sup>24-27</sup>

An open liver biopsy is required to establish a positive diagnosis of VLM. The morphologic criteria outlined by Nichols<sup>28</sup> may be used to identify the larvae, which average 320 microns in length and 18 to 22 microns in width at the mid-gut level in ordinary tissue sections. The identification frequently can be made from a single cross-section at the mid-gut level by virtue of the diameter of the larva, the prominent single lateral alae, the single intestinal cell, and the large posterior excretory columns which occupy a greater portion of the body cavity

than the intestine. Unfortunately, human infection cannot be diagnosed by the detection of *T. canis* eggs in the feces, since the parasite rarely reaches maturity in the human host. A variety of skin and serological tests have therefore been devised in an attempt to obtain a satisfactory tool for the diagnosis of *T. canis* infestation. To date, the skin test<sup>27, 29, 30</sup> with *T. canis* antigen appears to be the most specific, although it has been difficult to acquire enough patients with a biopsy proven diagnosis for testing, and to be certain that control subjects have not been previously infected. Circulating antibody to *T. canis* has been detected by means of a variety of serologic tests. Unfortunately, cross reactions with *Ascaris lumbricoides* have made the specificity of such tests questionable.<sup>31-34</sup> Aljeboori,<sup>35</sup> using sera from experimentally infected baboons, has recently described a microhemagglutination test which gave promising results. Cross reactions with other ascarids were still troublesome, but the use of larvae instead of adult worms in preparation of the antigen increased the sensitivity of the test. The fact that isohemagglutinin titers (anti-A and anti-B) have been found to be markedly elevated in patients with VLM has thus far not proved useful in diagnosis.<sup>36</sup>

Because of the problems noted above, the incidence and prevalence of *T. canis* infestation in humans remains unknown. Over 200 cases of VLM have been reported in the literature since 1950. These reports have come primarily from the United States, England, Australia, Central and South America, and India. It is significant that over 50 cases have been described in Louisiana alone, where interest in the malady is high. Furthermore, a number of surveys<sup>29, 37-46</sup> in several countries have shown that 15 to 30 percent of domestic dogs harbor the parasite, and that infestation is not limited to poorly nourished or stray animals. It is puzzling that more human cases have not been report-

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ed, considering the prevalence of this parasite in dogs, and the ample opportunity for exposure. Possibly the patients with VLM or ocular Toxocarosis represent only a small portion of the total infected population, the parasite being unnoticed in the remainder because it has not lodged in a critical spot, nor been ingested in large enough quantities to produce systemic symptoms. The healed granulomata are invisible to the naked eye in experimental infections, which probably accounts for the fact that such lesions are rarely observed in routine human autopsy material.

The life cycle of *T. canis* is intriguing and not entirely understood. The parasite infects most species of domestic dogs, and has also been recovered from foxes.<sup>37</sup> The adult worms live in the small intestine; eggs are passed with the stool, develop into the infective stage in about two weeks, and are then ingested from the soil by other dogs, humans and smaller mammals. When ingested by humans, adult dogs, or other mammals, the larvae migrate from the intestine into the liver and lungs, from whence they may reach the systemic circulation and be distributed to all parts of the body. They undergo no development or growth, and are gradually entrapped by fibrous capsules in various organs and tissues. Although encapsulated, many of the larvae remain viable and infective, and may therefore be transmitted from prey to predator. When ingested by puppies, the larvae behave in an entirely different manner. They migrate from the intestine to the liver, and then to the lungs, where they molt and enter the third-stage of growth. The third-stage larvae ascend the trachea, are swallowed and thereby reach the small intestine where they mature to adults.<sup>46</sup> Puppies may also become infected in utero by migrating maternal larvae, and indeed, many investigators think that this is the major mechanism through which the parasite is perpetuated. In this instance, the larvae remain in the fetal liver and lungs until birth, after which their growth cycle is completed as described above. On the basis of experimental evidence, it appears that the bitch must consume infective eggs around the time of conception for fetal mi-

gration to take place. Larvae cannot be demonstrated in fetal tissues prior to the 43rd day of gestation, however, which suggests that hormonal or other factors associated with pregnancy may importantly influence the fate of the larvae in maternal tissues.<sup>47, 48</sup> Further work is needed to more fully clarify the life cycle of this fascinating parasite.

The ingestion of large numbers of infective eggs is required to produce VLM in humans, and the fact that dirt eating is usually confined to children between one and three years of age probably accounts for the fact that VLM is most frequently seen in this age group. A history of pica has been obtained in nearly all patients thus far reported with VLM. The significance of the role of the individual host response in VLM is still not clear, however, and some investigators feel that the manifestations of the disease are more dependent upon an "allergic" reaction of the host than upon the number of parasites ingested. The disproportionately large amount of necrosis, and the copious eosinophilic response seen in tissue sections tend to support the latter interpretation. On the other hand, in the few recorded experiments using human subjects, three out of three patients developed prolonged eosinophilia following the oral administration of 100 to 200 infective *T. canis* eggs. Absolute eosinophil counts of from 10,000 to 15,000 per cubic millimeter were recorded in all three subjects for up to six months after inoculation, and significant eosinophilia persisted for more than a year in two.<sup>49, 50</sup>

The results of treatment of this disorder have been disappointing. Corticosteroids have been helpful in severely ill patients, particularly those with pulmonary or cardiac involvement.<sup>51</sup> It is difficult to evaluate such responses, however, since most patients with this disease are not critically ill, and the process is self-limited once the child has been prevented from ingesting further infective eggs. Furthermore, in recent years there has developed a tendency to diagnose VLM on the basis of clinical findings alone, without positive identification of the *T. canis* larvae. While this practice may be justified, in view of the morbidity associated with open liver biopsy, it is probably unwise to use such cases in assessing the efficacy of therapy. Pike<sup>52</sup> has shown limited



effects in experimentally infected mice treated with diethylcarbamazine (Hetrazan) and oxophenarsine hydrochloride (Mapharsen), but no effect in similar mice treated with piperazine citrate (Antepar). More recently, a defervescence of fever has been reported in association with 2-4'-thiazolylbenzimidazole (Thiabendazole) therapy in a single patient with documented VLM.<sup>53</sup> At present, there is no known treatment for ocular Toxocarosis. It is probably best to avoid enucleation of such eyes, however, since more effective therapy may be forthcoming. Treatment of dogs, especially puppies, is the surest method of preventing *T. canis* infection in humans. It is well to remember that puppies may be infected in utero by migrating maternal larvae, so that a litter may be infected even though the mother's intestine is free of *T. canis* adults. Once a child has been diagnosed as having VLM or ocular Toxocarosis, the source of infection should be identified if possible, and appropriate corrective measures taken. Since it is difficult to rid the soil of infective eggs, and the eggs may survive for long periods of time in dirt basements and other semi-protected areas, it is often necessary to prevent the child from playing in the contaminated region.

In summary, *T. canis* infects a large number of domestic dogs living in both tropical and temperate climates. The infective eggs are capable of prolonged survival in the soil, and when ingested in large numbers, usually by children between one and three years of age with pica, may produce the syndrome known as visceral larva migrans (VLM). In somewhat older children, and occasionally in adults, *T. canis* larvae may migrate into the eye resulting in blindness. Treatment with the various anti-helminthic agents has thus far been only partially successful.

#### ACKNOWLEDGMENT

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## VLM / STOUT

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## ANNOUNCING THE CENTURY CLUB



Pictured above is the expanded office building of the Oklahoma State Medical Association. The expansion program—designed to provide adequate space to meet accelerating activities of organized medicine—has depleted reserve funds. To restore reserves and to purchase necessary furnishings and equipment, the Board of Trustees has cre-

ated the "Century Club." Physicians who contribute \$100 or more to the OSMA building fund will qualify for membership, and their names will be engraved on a handsome plaque to be permanently displayed in the building. Contributions are tax-deductible. They should be sent to OSMA, 601 N.W. Expressway, Oklahoma City 73118.



# Tumor Clinic Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.

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## CASE No. 19: Hurthle Cell Carcinoma of the Thyroid.

**PRESENTATION:** The patient is a 73-year-old white male who first noticed a lump

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

in his right side of his neck 11 months ago when he went to his family physician who did a right thyroid lobectomy. Microscopic examination of the tumor indicated that it was a Hurthle cell carcinoma of the thyroid with gross and microscopic invasion of the internal jugular vein and also a small artery. The patient recovered from this surgery and upon receiving the pathology report, his surgeon referred him here to the Oklahoma City V.A. Hospital. At that time, he had no lymph nodes palpable in his neck. His wound was well healed and he underwent an endocrine evaluation. He had a normal PBI at that time. He had an I-131 uptake scan which revealed that the left lobe of the thyroid functioned well and he had a normal thyroid scan with no cold areas in it. There was no evidence of ectopic uptake of the I-131. The patient at that time had a normal metastatic survey, normal liver function studies and no evidence of metastatic disease. He had a TSH stimulation test which did not reveal any abnormalities. The patient was seen in consultation with Radiation Therapy and they recommended that the patient have no external therapy at that time. The reason for presenting him at this time is that he has developed nodules in the right anterior side of his neck, the same side as his original tumor. He has no other metastases and no symptoms.

Upon admission to the hospital, the patient was hoarse and reports in retrospect



that he has been hoarse since prior to his original surgery 11 months ago. He has a 1 cm x 1 cm, freely moveable, subcutaneous nodule in the right anterior neck. He also has some large irregular nodes along the carotid sheath on the same side. The posterior cervical region and the opposite side are not involved. His liver function studies are normal but we do not have a metastatic bone survey at the present time. The patient remains in good health. Indirect laryngoscopy confirms the presence of a paralyzed vocal cord on the right side. The patient is on three grains of dessicated thyroid per day.

DOCTOR CONDIT: Doctor Williams, how would you manage this patient now?

DOCTOR WILLIAMS: I gather the tumor has recurred and is, categorically, inoperable carcinoma of the thyroid. There is a recurrent mass and several nodes in the neck and I think the question is what other modalities of treatment are open.

DOCTOR CONDIT: Doctor Snow?

DOCTOR SNOW: Six months ago, we had a woman who had a partial resection of the trachea and larynx, essentially a partial laryngectomy and partial tracheotomy, in which a good functional result was obtained. I am not clear what part is inoperable; maybe I did not feel the right thing.

DOCTOR WILLIAMS: I am not sure that you could not devise a way to get the mass out and connect the trachea to skin but the other side (sic) of the thyroid is involved now. The right recurrence surely involves the trachea and with the appearance of several nodes in the right side of the neck, it just seems to me that it is not a reasonable operation.

DOCTOR CONDIT: Do you agree, Doctor Snow?

DOCTOR SNOW: Yes, I do. There are however, some aspects of reconstruction of the trachea and larynx that might be applicable to this patient.

DOCTOR CONDIT: What do you think about the nodes along the carotids?

DOCTOR SNOW: I think that there are multiple nodes along the carotids; anterior and medial to the carotids as well as at the bifurcations.

DOCTOR CONDIT: Doctor Bogardus, what about radiation therapy?

DOCTOR BOGARDUS: We still have the same situation that we had last summer. This is not a favorable tumor to treat with radiation. At this point, we probably have little or nothing else to offer. I would use radiation only with the understanding that it probably isn't going to accomplish much. We have been through all this before and basically this tumor is not at all radio-responsive.

DOCTOR CONDIT: Doctor Chanes, do you know anything about chemotherapy in this particular lesion? I don't remember. I don't think that anything has been done with it.

DOCTOR CHANES: I think that this is considered an unresponsive tumor with conventional chemotherapeutic agents. I don't know about this cell type.

DOCTOR CONDIT: No, I don't either. Any other comments or suggestions?

PRESENTER: What about the possibility of large doses of I-131?

DOCTOR BOGARDUS: You cannot do any effective internal therapy on him at present because he still has functioning thyroid tissue. We would have to totally ablate his normal functioning thyroid with a high dosage of radio-iodine, wait six weeks to two months, stimulate him with TSH and see if any of the tumor takes up the isotope, which you would not expect. If it did take up the isotope, then of course this is the ideal way to handle these cases as far as treatment is concerned. We have a patient with a well differentiated carcinoma of the thyroid that we are treating this way. If this tumor did function then this would be an ideal way to treat it, but if it did not function then we would be wasting our time. We could not know until we ablate the normal gland.

PRESENTER: This TSH stimulation was carried out about eight months ago and this man did not have palpable nodes. Would it do any good to repeat this?

DOCTOR BOGARDUS: The TSH stimulation will not tell you anything as long as there is normal functioning thyroid present. I really don't know why it was done six months ago. He still has functioning thyroid on the left but you have to eliminate all thy-



roid before you can see any tumor, which may take up only one to two percent of the dose of I-131, at the very most. Before this tumor will show up, you will have to get rid of all the thyroid. I would advise, if you are really interested in going that route, that you treat him with a high dose of radio-iodine now and ablate his normal thyroid.

DOCTOR CONDIT: Doctor Bogardus, do you suggest going this route?

DOCTOR BOGARDUS: I think that it would still be a worthwhile approach. The main reason is that these tumors really don't respond well to radiation therapy and if we have to treat him with external radiation, all it is going to really accomplish is a chance at palliation and I don't think that it is going to have much effect on the tumor. If the tumor takes up radio-iodine, you have a chance of putting a lot more radiation into the tumor which is the main reason that this works better than external treatment. It is not going to hurt anything to ablate the thyroid and if you want us to try, we could go ahead and at least try him on radiation therapy. If he is obviously not responding in three or four weeks then we would probably stop.

*FINAL DIAGNOSIS:* Recurrent Hurthle cell carcinoma of the thyroid.

*TUMOR CLINIC RECOMMENDATION:* Ablation of the thyroid with a large dose of I-131 followed in two to three months with a TSH stimulation test followed by an I-131 scan of the metastatic nodules to determine whether they take up I-131. If the metastatic lesions take up the I-131 the patient will be treated with a large dose of I-131; if they do not take up I-131 they will be treated with external radiation therapy, with the understanding that the chance of their response to this form of therapy is quite remote.

CASE No. 20: Undifferentiated Carcinoma of Unknown Origin.

PRESENTATION: This is a 30-year-old white female whose illness began in January of 1969 when she noticed a pea sized nodule in the left supraclavicular region. This was biopsied at another hospital and was reported to show an undifferentiated carcinoma. At that time she was relatively asymptomatic, except for some easy fatigability when she walked or worried. She had lost

ten to 15 pounds in weight over the past year. Her physician referred her here, because he could not find the source of this carcinoma. Essentially this is all of her present illness. Three years ago, she had pneumonia and was admitted to a hospital in California, apparently comatose. We have no history other than this. Her present physical examination revealed normal vital signs. She had no lymphadenopathy except for some very small cervical and supraclavicular lymph nodes which were really not very remarkable. The liver was palpable approximately one cm below the right costal margin. It did not seem to be enlarged. The spleen was not palpable and there were no other abdominal masses noted. The stool was guaiac negative. The pelvic examination was not remarkable. The liver function tests were all within normal limits. The blood calcium and phosphorus were normal. An initial white count was 18,000 cu. mm., but repeat counts were within normal limits. The rest of the blood count was within normal limits. The urinalysis showed some white cells and urine culture showed greater than  $10^5$  *E. coli/ml*. Urine cytology, sputum cytology and cervical cytology were all normal. The slides were reviewed by our pathology department and were reported to show an undifferentiated carcinoma. The pathologist had no suggestions as to the primary site. A sinus film showed an air fluid levels in the left maxillary sinus and she was seen by the Otolaryngologic Service and they felt this was compatible with chronic sinusitis. She was started on antibiotic therapy with a recommendation of repeat sinus films in three weeks with the possibility of an exploration if this didn't clear up. The repeat sinus film showed clearing of the fluid in the left maxillary sinus. Pulmonary function studies were unremarkable. The chest film showed a bilateral diffuse infiltrate which looked like pulmonary fibrosis or a pneumoconiosis and it was also suggested that it might be lymphatic spread of carcinoma although this wasn't high on the list of differential diagnoses. There has been no change in the appearance of the chest x-ray. The skeletal survey was essentially unremarkable except for an old healed fracture of the left femoral head. A mammogram showed small cystic densities throughout both



## *Tumor Clinic* / BOTTOMLEY

breasts, but they were felt not to be malignant. A thyroid scan showed a normal uptake of 13 percent with a one-half cm cold area on the inferior edge of the left lobe which was felt not to be pathological. The liver scan, IVP, barium enema, upper GI series and gall bladder series were all normal. She is being presented to the Tumor Clinic for suggestions for further diagnostic procedures and possible therapy.

DOCTOR BOTTOMLEY: There are at least three possibilities. Because of her age the most likely diagnosis would be Hodgkin's disease or lymphoma although the pathology report would rule that out. Another possibility is that she had a primary some place in the naso-pharynx, but it was too small to be seen. The other possibility is that there might have been a mixup in slides some place and her biopsy was switched with another biopsy prepared the same day.

DOCTOR CONDIT: What kind of nodes does she have now that might be biopsied?

PRESENTER: Very small ones in the cervical and supraclavicular region.

DOCTOR CONDIT: Doctor Snow, what about the upper air passages as a possible primary site?

DOCTOR SNOW: That is a possibility. She has been examined carefully at least on one occasion by our service and nothing abnormal was noted in the area. I think it might be well to repeat the examination at this time. At the time of the original examination a biopsy of the nasopharynx was recommended and I don't believe that's been carried out. The histology of this tumor would suggest to me that one of the possibilities would be a tumor of the salivary glands. Whenever a bizarre cell type occurs the salivary glands deserve consideration. Perhaps a sialogram of all four major salivary glands would be in order.

DOCTOR CONDIT: What about the maxillary sinus?

DOCTOR SNOW: I suppose that there is a very slight possibility that they could be the site of the lesion, but I think they can probably be excluded.

DOCTOR CONDIT: Would you expect a tumor of the sinus to clear in this fashion?

DOCTOR SNOW: No, we'd expect to see

evidence of some mass on the x-rays. We have a good situation in the sinuses for picking up even small masses, because of the air contrast with soft tissue. I don't think it would be justified to explore her maxillary sinuses or any other sinus.

DOCTOR CONDIT: Doctor McClellan, what about the salivary gland as a possible primary site?

DOCTOR McCLELLAN: I hadn't thought of that, but it certainly is a possibility.

DOCTOR CONDIT: Is it compatible with what you see on the slides?

DOCTOR McCLELLAN: Yes, they sometimes present with a histological appearance like this. I was wondering about her lungs as another possible primary site.

DOCTOR SNOW: Yes, that is a possibility. It would probably be a good idea to do a bronchoscopy if that has not been done previously.

DOCTOR BOGARDUS: Did they think of looking at the thyroid while they were in the neck? Because I'm concerned about this thyroid, I think it probably ought to be reviewed. It's not really a normal thyroid scan. It's not really that bad, but if you don't come up with anything else, it might be worth repeating. If you go to all the trouble to operate on the neck, you might as well take a look at the thyroid while you are at it.

DOCTOR BOTTOMLEY: The question that arises now is whether to treat the left neck with radiation therapy in a blind attempt to control the tumor. The other possibility would be to follow her and not to worry about where it is coming from until she develops some evidence of a primary. It seems to me that the therapy would depend upon the exact source of the tumor.

DOCTOR CONDIT: Doctor Bogardus, what do you think?

DOCTOR BOGARDUS: I feel that we should have more evidence before we treat. I suppose in the end if all else fails, we might treat the neck nodes.

DOCTOR CONDIT: There have been several suggestions. Perform sialograms on the major salivary glands, do an endoscopy and look for something in the lung, and biopsy a scalene node and re-investigate the thyroid.

DOCTOR SNOW: Also an examination of the naso-pharynx.

DOCTOR CONDIT: Would a biopsy of



the naso-pharynx be in order if no lesion is found in examination?

DOCTOR SNOW: Yes, she ought to have a biopsy taken even if no lesions can be found.

DOCTOR CONDIT: Is she willing to come back to go through this battery of additional procedures?

PRESENTER: Yes, I think she probably would.

DOCTOR WILLIAMS: Do you suppose you ought to look at her esophagus, too?

DOCTOR SNOW: Yes, what I had in mind was to do laryngoscopy, bronchoscopy, esophagoscopy, and examination of the naso-

pharynx with biopsies taken even though no definite lesion is found in the naso-pharynx.

*FINAL DIAGNOSIS:* Undifferentiated carcinoma metastatic to the left supraclavicular nodes from an undetermined primary.

*TUMOR CLINIC RECOMMENDATIONS:* It was recommended that the patient have a repeat examination of the naso-pharynx with a blind biopsy being performed if no lesion is found. In addition it was recommended that the patient have a laryngoscopy, bronchoscopy, esophagoscopy and sialograms and a repeat scan of the thyroid. If all of the above examinations are negative an exploration of the left neck and thyroid should be considered. ☐

## **23rd AMERICAN MEDICAL ASSOCIATION CLINICAL CONVENTION**

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## Governor Sponsors Conference on Drug Abuse

Oklahoma's Governor, Dewey Bartlett, is sponsoring a special conference on drug and narcotic abuse to be held in Oklahoma City on December 1st and 2nd. Purpose of the conference is to familiarize interested persons with the scope of the problem and possible solutions.

The Governor is issuing a special invitation to all Oklahoma physicians to attend the meeting. In addition high school administrators, police chiefs, sheriffs, district attorneys, P.T.A. presidents, pharmacists, and judges are being invited to attend.

The two-day meeting will start on Monday, December 1st, at 9:00 a.m. with an address by the governor. This will be followed by a presentation from G. T. Blankenship discussing the depth of the problem.

The main program will then consist of a presentation by Donald B. Louria, M.D., author of the book "Drug Scene," and Pat O'Carroll, special Whitehouse assistant in charge of the president's drug abuse proposals.

There will be two afternoon speakers, a former drug user and Lee Brown, Ph.D., Professor of Education at Oregon University. These will be followed by four workshops and group discussions on the following subjects: Rehabilitation, corrections, and the court; Education and community actions; Law enforcement; and facts, research and their role in shaping public attitudes.

Tuesday's session will feature talks on "Rehabilitation, correction, and courts" and "Law Enforcement."

The afternoon will be taken up by recommendations and summaries of accomplishments from the four workshops.

The conference will be held in the Oklahoma Hotel Convention Center in downtown Oklahoma City and will be open to the public along with invited guests. Any physician interested in attending the conference may contact the Oklahoma Attorney General's office, State Capitol Building, for additional details. □

## Trustees Adopt Policy on Interest

OSMA Trustees have adopted a policy on physicians charging interest or attaching penalty or service charges to unpaid bills. The action was taken at a meeting of the Board of Trustees on October 24th.

It was reported to the board that the AMA's Judicial Council had recently ruled on the subject, but that such rulings are only advisory to state associations. The board then adopted the following policy: "It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note or to charge a penalty on fees for professional services not paid within a prescribed period of time; nor is it

proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection."

In another action the board commended the Oklahoma University Board of Regents and James L. Dennis, M.D., Dean of the O.U. Medical School. The commendations were occasioned by a new policy concerning the position of vice president and director of the medical center.

On October 15th the Board of Regents adopted the following policy statement: "The vice-president and director of the medical center is the executive officer for the Oklahoma Medical Center campus (of the Uni-

versity of Oklahoma). He is responsible for all fiscal, academic and service units of the campus and the head of each of these units is responsible to the vice-president and director and through him to the president of the university."

The motion to commend Dennis pointed out that he had resigned the prestigious position of dean of the medical school in order to better fulfill his position as vice-president and director of the medical center.

Doctor Dennis informed the board that a search committee would be appointed to select a new dean for the medical school and for the school of nursing as soon as possible and stated that the medical association would be represented on the committee.

### Other Actions

In other actions the OSMA Board of Trustees approved a policy to the effect that the use of credit cards to pay medical bills is left to the discretion of the individual physician, with the stipulation that any physician using this vehicle shall not receive monies greater than his professional fee. At the same time the board declined to give a credit card company a letter authorizing them to solicit participation by Oklahoma physicians.

The board voted to allow credit card companies to advertise in association publications and to purchase exhibit booth space during the annual meeting so long as such companies do not imply that they have the endorsement of the medical association.

Scott Hendren, M.D., Chairman of the OSMA Planning Committee, gave the Board of Trustees a review of the activities of his committee. His report is covered in detail in a separate story in this issue of *The Journal*.

Following the meeting the trustees attended the annual banquet sponsored by the association to honor the members of the Oklahoma University Medical School SAMA Chapter. Approximately 475 students and their wives or dates were in attendance. □



## Planning Committee Interests Cover Wide Range

On October 5th the 12 members of the OSMA Planning Committee found themselves faced by a number of important decisions. Not the least among them was the expansion of the headquarters building, providing secretarial services to medical specialty groups, and creation of a blue ribbon committee on the subject of physicians for rural Oklahoma.

Following the meeting of the Planning Committee it was necessary for Scott Hendren, M.D., Committee Chairman, to take the committee's recommendations to the OSMA Board of Trustees during its October 24th meeting. The board gave the necessary authority for the plans and programs to be put into action.

### Rural Physicians

During the committee's meeting it was reported that there was increasing legislative interest in the shortage of physicians in rural Oklahoma and there was concern expressed that unworkable legislation might be introduced.

It was suggested that the OSMA, through the office of the president, form a special blue ribbon committee to serve under the Council on Public Health. Purpose of the committee would be to make workable suggestions as to possible solutions to the problem of supplying physicians for medical care to rural Oklahoma. The committee would be made up of physicians and ex-officio members from agriculture, government and industry.

On October 24th the Board of Trustees approved a resolution calling for the creation of such a "blue ribbon" committee to study the delivery of medical services in rural Oklahoma.

### Headquarters Expansion

The committee was reminded by Chairman Hendren that the Board of Trustees had authorized the creation of a "Century Club" as a means to raise additional tax-deductible funds to furnish the new areas of the expanded OSMA headquarters build-

ing. The club is made up of physicians and others who contribute \$100 or more to a fund. In return they will have their names engraved on a plaque to be permanently displayed in the headquarters building.

It was reported that the Women's Auxiliary to the OSMA had generously contributed \$2,000 to the new building fund. In return for this contribution the committee determined one of the conference rooms in the headquarters building should be designated and identified with an appropriate plate as the "Auxiliary Room." The Board of Trustees approved this idea.

The committee received a financial statement on the purchase of furniture for the expanded headquarters. The statement indicated that furniture purchases had inadvertently exceeded available funds by \$350. However, it was pointed out that some of the furniture pieces being purchased were actually replacements and not new items. The committee recommended and the OSMA Board of Trustees approved a policy that necessary equipment unrelated to the expansion of the building be considered as replacement items and not reflected in the building budget. They are to be purchased from available operational funds.

### Specialty Societies

After hearing a report on the June 29th conference with representatives of special interest medical societies, the planning committee voted to recommend to the OSMA Board of Trustees that an advisory panel of special-interest society representatives be created for the purpose of providing two-way liaison with OSMA councils, committees, officers and policy making bodies. Members of such a panel would not necessarily be convened as a committee, but they would routinely be sent materials related to OSMA activities and would be invited to attend meetings where their special interests were involved.

It was reported that several special interest medical groups had asked if it would be possible for the OSMA to provide staff secretarial service

to them. During the June 29th meeting representatives of the various specialties were generally in favor of this proposition, although some societies felt that they would not need it. The planning committee adopted a policy that this service could be offered to the specialty societies on a time-cost basis. It was concluded that no expense should accrue against the OSMA general dues income since the service would not be used by all members and should thus be self supporting. □

## Certification Time Shortened By Social Security

Time required for the certification of medical necessity is being shortened by the Social Security Administration. The length of time after which a physician must certify the medical necessity of a Medicare patient's hospital stay will be changed after next January 1st.

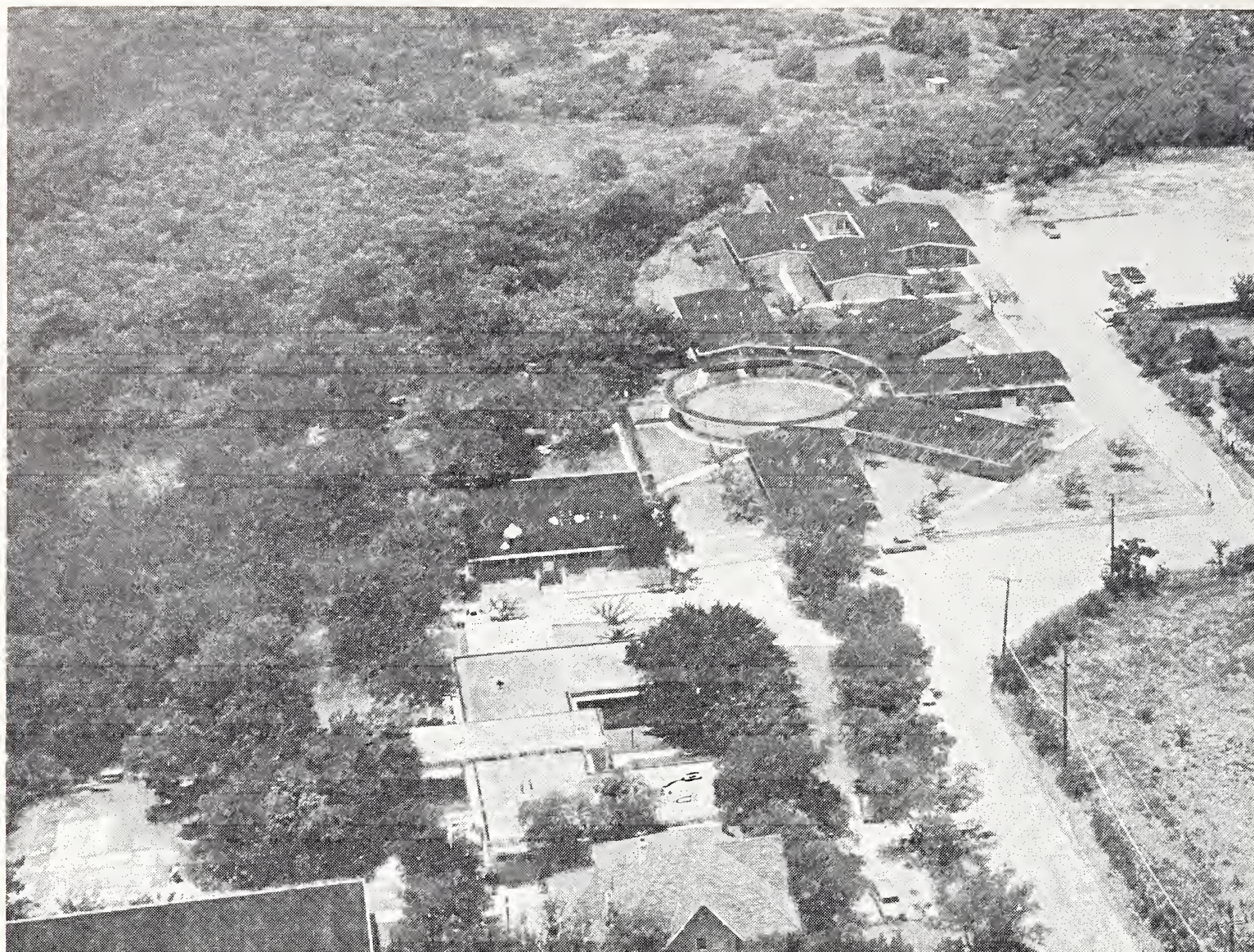
With the new year the first certification of medical necessity must come after the 12th day of hospitalization, rather than the presently required 14th day. Recertification will be moved up from the 21st day of hospitalization to the 18th day.

Washington observers say that the administration's move is seen as a dollar saving for Medicare. Social Security feels that a significant number of Medicare patients are discharged on the eve of "certification day" by doctors who don't want to go through the bother—or who can't make a good case for continued hospitalization.

Some observers feel that the move might have grown out of a new government survey which shows that hospital costs are rising faster than anticipated and that the elderly patients are spending more time in the hospitals. At the present rate if the taxes are not raised the Medicare trust fund will be exhausted by the fall of 1972.

Chief actuary for the Social Security Administration, Robert Myers, forecasts daily hospital costs will rise 15 percent this year, 14 percent in 1970 and 13 percent in 1971. □





# The Beverly Hills Hospital The Beverly Hills Clinic

## *Acute Psychiatric Diagnostic and Treatment Center*

☆ New Outpatient and Hospital Facilities ☆ Beautiful New Buildings On a Secluded Scenic and Wooded Site ☆ Open Cottage System and Regulated Intensive Treatment Units ☆ All Established Methods of Diagnosis and Treatment Utilized. ☆

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## Congressmen Appalled At Indian Hospitals

An inspection of three Oklahoma Indian Hospitals operated by the United States Public Health Service was conducted in October by Congressmen Ed Edmondson and John N. "Happy" Camp. While their staffs were inspecting facilities at Pawnee and Tahlequah, the two congressmen made an unannounced visit to the Claremore Indian Hospital.

In his weekly "Report to Congress" column Representative Edmondson said that the inspection had brought to light "drastic shortages of medicine and medical supplies." He pointed out that funds were so short that adequate medical treatment was sometimes impossible and that there were long delays in requisitions for supplies and equipment.

Shortages included basic drugs, antibiotics, i.v. sets, tuberculosis test kits, and vaccines. At Pawnee, influenza shots could not be given to more than 600 Indian students at Chilocco School because the vaccine was not available. No immunization shots were being given to more than 400 Indian students at Sequoyah School in the Tahlequah area because of shortages.

The Congressman said, "The blame for these conditions is squarely on the shoulders of the Federal Government which has long assumed major responsibility for Indian health both by law and treaty. Congress has failed to appropriate adequate funds to meet the rising hospital and drug costs, and administrative spending ceilings have reduced available funds even further." He went on to say that the situation is so bad that these hospitals are currently being financed on a month to month basis.

The congressmen have reported their findings to the House Committee on Interior and Insular Affairs and to the Subcommittee on Indian Affairs.

Camp and Edmondson are taking the necessary steps to determine how much money is needed immediately to alleviate the current drug and equipment crisis, and how quickly Congressional action appropriat-

## Allergists Meet in Oklahoma City



JOHNNY A. BLUE, M.D.

Two hundred members of the American Association for Clinical Immunology and Allergy gathered in Oklahoma City November 5th-8th for their annual meeting. Johnny A. Blue, M.D., Oklahoma City, is President of the organization for this year.

Made up of M.D.'s who have passed the American Board of Clinical Immunology and Allergy, the association has nearly 500 members through-

ing these funds can be taken. One long term solution will be to seek a higher appropriation early next year before the Appropriations Committees of the House and Senate. □

### PAN-AMA Meeting Exciting For Oklahoma Doctor

An Oklahoma City physician found the Pan American Medical Association meeting in Ecuador to be more exciting than the usual scientific get-together. Joe Kelso, M.D., Oklahoma City, was invited to be on the scientific program with Doctor Christian Bernard of South Africa.

The Pan-AMA Meeting was held on September 17th-20th and a reception for the guest scientific speakers was held on the first evening. Doctor Bernard's plane was late and the

out the United States.

Each day of the three-day meeting was dedicated to a different area of interest. These were economics, clinical, and scientific.

Doctor Blue has served the organization as President and President-elect for the past two years. On Saturday, November 8th, he officially stepped down after election of the new officers for 1970.

Among his other accomplishments, Doctor Blue is the 1969 President of the National Association of Left Handed Golfers. He is an accomplished writer and is a member of the Medical Writers Association of America and a contributing editor to the Review of Allergy and editor consultant to Emergency Medicine. He is a contributing author to two books, Current Therapy and Regional Allergy, and has contributed about 25 articles to medical literature.

During World War II Doctor Blue was called to active service with the Navy and was selected to have post-graduate training in allergy at the National Naval Medical Center, Bethesda, Maryland. He later established a number of allergy clinics for the Navy in the United States and Hawaii. □

reception began without him.

In the middle of the report being given by the Secretary of Health of Ecuador, ten Equadorian soldiers armed with submachine guns came into the room escorting Doctor Bernard. The story then unfolded that Doctor Bernard was being kept under guard at all times while in the country because the Equadorian government had been informed that he might be kidnapped.

During the meeting Doctor Kelso spoke to the assembled delegates on his 24 years of experience with the surgical management of cancer of the cervix and on gynecological urological complications and management.

Following the Pan-AMA meeting, Doctor Kelso and his wife traveled to several other meetings in South America. □



## Insurance Review Workload Heavy

Peer review for disputed medical insurance claims has become a heavy workload for the OSMA's Medical Insurance Review Committee. The committee now meets regularly each month to consider questioned cases.

The following are examples of some of the actions taken by the committee at its regular meeting October 26th.

Case 1: The physician saw the patient and performed the following procedure in his office, "excision of proliferating keratosis from scalp—local anesthesia—lesion closed." For this procedure he billed \$52.50. The insurance carrier offered \$35 as payment in full, which amount was refused by the physician and the case was brought to the committee. During the committee meeting the physician explained that his charge reflected a \$7.50 charge for the initial office visit and that the charge for the surgery itself and postoperative visit was only \$45.

The committee took note of the fact that the procedure was performed in the doctor's office where it was necessary for him to furnish his own sterile instruments, supplies, and anesthesia. They then recommended \$45 as payment in full to reflect both preoperative and postoperative visits.

Case 2: Early this year a physician performed a third repair of a recurrent left inguinal hernia, McVay type. His fee for this procedure was \$300. The insurance carrier responded with an offer of \$225 as payment in full, which the physician refused and the case was brought to the committee.

After reviewing the case, the committee recommended that the insurance carrier pay the fee as billed. During discussion it was pointed out that each recurrence would make it increasingly difficult to repair the condition and that it seemed reasonable that there would be a higher fee.

Case 3: Earlier in the summer the physician performed the following procedure: laparotomy with excision of ovarian tumor, right, lysis

of adhesions, tubes and ovaries, reconstruction of lateral pelvic peritoneum, freeing of the fimbria of the tubes. His charge for this procedure was \$360 and the insurance carrier responded with an offer of \$300 as payment in full. The question was brought before the insurance review committee.

The committee found that this was a very delicate and time consuming operation and that the surgeon had taken all precautions to preserve the patient's child bearing function and give her a chance to have children. The committee recommended that the charge be paid as billed.

Case 4: In February of this year the physician performed a surgical procedure and billed the patient \$600. The insurance carrier responded by offering an amount of \$350 as payment in full. In rejecting this offer the physician stated that this was a complex case requiring extensive surgery, workup and postoperative treatment. After reviewing all of the material submitted by the doctor to the insurance carrier the committee recommended a payment of \$400. They stated that the information available did not indicate any excessive difficulty in the surgery and therefore did not justify the higher fee. □

## PMA Supports Justice Department Regulation

A proposed new regulation by the Justice Department's Bureau of Narcotics and Dangerous Drugs has gained support from the Pharmaceutical Manufacturers Association. The new regulation would impose stricter controls on the sale of certain cough syrups and other medications.

The new regulation was published in the September 10th issue of the *Federal Register*. In essence, the regulation would establish additional controls over the sale of non-prescription narcotic-containing cough syrups, paregoric, and other such products to make sure they are used only for medical purposes.

Member companies of the PMA produce a substantial number of such products made in the United States.

Under the proposal, such preparations henceforth would be subject to federal requirements that:

(1) Sales be made only by registered pharmacists.

(2) Purchasers under age 18 would have to have a prescription.

(3) Purchasers provide suitable identification and pharmacists record the names and addresses of purchasers.

(4) Set quantity limitations on the amount sold to any individual within a 48-hour period.

PMA general counsel Bruce J. Brennan said that PMA also supports the concept of the new regulations, that is, "that the public health and welfare, as well as state and national enforcement efforts, are best served by uniformity in state and federal regulations related to narcotic drugs."

He pointed out that currently some state and local control measures are so restrictive as to "adversely affect the availability of valuable medical preparations to ill persons." Other state laws are so weak "as to offer virtually no control." □

## Doctors-Lawyers Plan Meetings

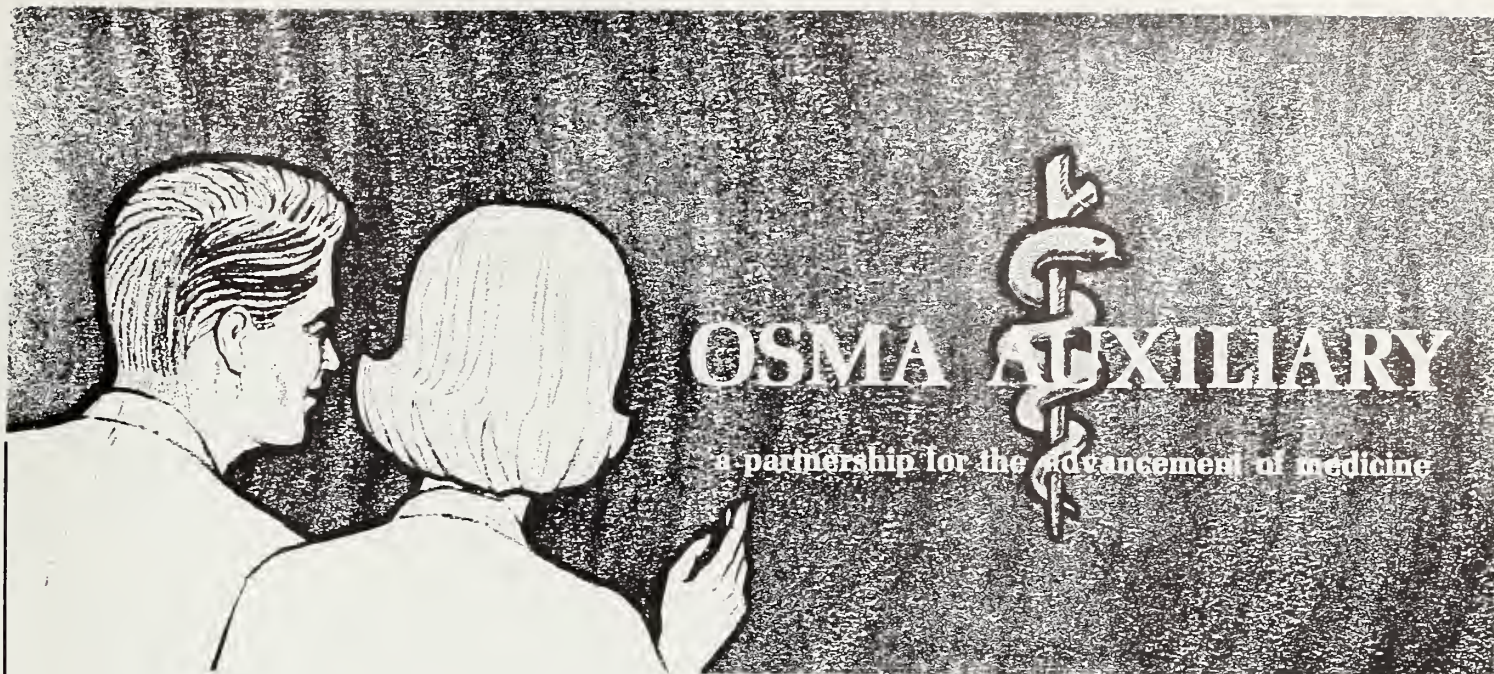
A recent meeting of the joint OSMA-Oklahoma Bar Association committee resulted in plans for two statewide meetings. The joint committee met to discuss preliminary plans for the biennial medical-legal seminar.

While discussing the program for the seminar it was revealed that both the doctor and lawyer sides of the committee felt that the interprofessional code needed to be re-examined and updated. It was decided that this project would warrant a separate meeting.

The joint committee determined to hold the medical-legal seminar in early July at Arrowhead State Lodge on Lake Eufaula. A meeting to discuss the Interprofessional Code will be planned for January or February of 1970.

All state physicians and attorneys will be invited to attend the seminar, but the Interprofessional Code meeting will be by invitation. □





# Has Your Wife Joined The Auxiliary?

## *ASK HER!*

**IF NOT, PLEASE SEND \$7.00 TO:**

**Mrs. Richard B. Price, Treasurer**  
**Woman's Auxiliary to Oklahoma State Medical Association**  
**3008 Hackberry**  
**Oklahoma City, Oklahoma 73120**

### **TWO GROUPS . . . ONE GOAL**

Organized Medicine in Oklahoma is definitely a "His" and "Her" operation. Two groups—the Oklahoma State Medical Association and its Woman's Auxiliary—work as a team toward the common objectives of the medical profession, just as the husband and wife team jointly plans and conducts the family life of the marriage partnership. To be a physician's wife is to be a part of two groups—the Oklahoma State Medical Association and its Woman's Auxiliary to the OSMA!



## Oklahoma Regional Medical Program: A Progress Report . . . Fall, 1969

DALE GROOM, M.D.\*

Oklahoma's Regional Medical Program is now more than three years old. Necessarily, most of that time has been spent in planning and organizing activities which are tailor-made by our own staff and Advisory Group for the health care needs peculiar to our state. We have now emerged from the planning phase and are implementing nine projects reaching, directly or indirectly, into virtually all sectors of Oklahoma. It is appropriate that we let you know from time to time the progress and trends of your Regional Medical Program, perhaps even some of our hopes and aspirations. In a period of far-reaching budget cutbacks in the health care field, a glossy, ornate and costly publication would be an unseemly extravagance. Rather, we shall utilize occasionally the *Journal of the Oklahoma State Medical Association* to apprise our colleagues and friends of significant developments along the way. And we will at all times, welcome your comments and suggestions in our common cause.

### Coronary Care

A few statistics on coronary heart disease, our country's leading cause of death, point up certain urgent needs in American medicine. Approximately half the patients hospitalized for treatment of myocardial infarction are treated in hospitals of less than 100 beds. Obviously the greatest returns in improving the care of this large segment of our patient population will be realized by bringing the facilities and standards of treatment in these smaller hospitals more in line with those of the more affluent medical centers.

About half of the patients who die from acute myocardial infarction die

\*Director, Oklahoma Regional Medical Program, and Associate Dean for Continuing Education, University of Oklahoma Medical Center.

Continued on Page 551

## DEATHS

WAYNE A. STARKEY, M.D.

1906-1969

Wayne A. Starkey, M.D., Altus ophthalmologist, died October 16th, 1969. A native of Martha, Oklahoma, Doctor Starkey was graduated from the University of Oklahoma School of Medicine in 1934. He established his practice in Altus following a period of practice in New York City.

Doctor Starkey was a Past-President of the Alumni Association of the University of Oklahoma School of Medicine, a Board Member of the Oklahoma Blue Cross-Blue Shield, a director of the Oklahoma Medical Research Foundation and a member of the Oklahoma Academy of Ophthalmology and Otolaryngology.

E. T. SHIRLEY, M.D.

1910-1969

A Wynnewood physician, E. T. Shirley, M.D., died in Oklahoma City, October 4th, 1969. Born in Texas, Doctor Shirley graduated from the University of Oklahoma School of Medicine in 1934. In 1936, he moved to Wynnewood where he practiced continuously except for his service in the Navy during World War II.

O. C. KLASS, M.D.

1881-1969

A long-time Muskogee physician, O. C. Klass, M.D., died September 30th, 1969. Born in Louisville, Kentucky, Doctor Klass graduated from the University of Louisville School of Medicine in 1904. Following his internship in Austria, he began his practice in Muskogee in 1905. He had been active in his practice until his retirement in January of this year.

Doctor Klass had served as Muskogee city physician and was instrumental in organizing the first City Health Department in Muskogee.

In 1955, the Oklahoma State Medical Association awarded Doctor Klass a Life Membership in recognition of his fifty years of practice.

ROSCOE WALKER, M.D.

1885-1969

A retired Pawhuska physician, Roscoe Walker, M.D., died in Denver, October 13th, 1969. He was the father of Tulsa internist, Dean C. Walker, M.D.

A 1911 graduate of Columbia University College of Physicians and Surgeons, Doctor Walker had practiced in Pawhuska for over 40 years. Following his retirement in 1954, he moved to Denver.

He was a Fellow of the International Academy of Medicine; had been awarded a distinguished service citation from the University of Oklahoma Medical Center in 1961 and a Life Membership by the Oklahoma State Medical Association.

JOHN C. PERRY, M.D.

1894-1969

John C. Perry, M.D., a long-time Tulsa physician, died October 7th, 1969. He was a cousin of two Tulsa physicians, Fred J. Perry, M.D., and Hugh Perry, Jr., M.D., and father-in-law of Jack W. Newport, M.D., also a Tulsa physician.

Born in Greenwood, Arkansas, Doctor Perry graduated from the University of Oklahoma School of Medicine in 1923. Following five years residency training, he established his practice in Tulsa.

In 1966, the Auxiliary of the Tulsa County Medical Society named Doctor Perry as "Doctor of the Year." He had served as President of the Tulsa County Medical Society and was a former member of the State Board of Medical Examiners.



EVA A. WELLS, M.D.  
1882-1969

A retired Oklahoma City physician, Eva A. Wells, M.D., died October 17th, 1969. Doctor Wells was a graduate of the Epworth College of Medicine. She practiced in Oklahoma City until her retirement in 1961.

The OSMA honored Doctor Wells in 1957 with a Life Membership for over a half-century of dedicated work in her profession.

JULIAN J. KENNEDY, M.D.  
1916-1969

An Edmond ophthalmologist, Julian J. Kennedy, M.D., died October 8th, 1969. The 53-year-old physician was a native of Meridian, Mississippi and moved to Oklahoma in 1933. A 1942 graduate of the University of Oklahoma School of Medicine, Doctor Kennedy practiced in Carnegie before moving to Edmond in 1949.

ROBERT H. ADAMS, M.D.  
1896-1969

A long time Oklahoma City physician, Robert H. Adams, M.D., died October 26th, 1969. Born in Sac City, Iowa, the 73-year-old physician graduated from Creighton University School of Medicine in 1929. His practice was established in Oklahoma City the following year. Doctor Adams limited his practice to his specialty, occupational medicine.

Continued from Page 550

within the first two and a quarter hours after onset, and three-fourths of them die within the first six hours. The vast majority of these deaths are of course due to arrhythmias, and therein lies the justification for early and continuous monitoring of the electrocardiogram in acute myocardial infarction. ORMP's largest current project is the one devoted to improving coronary care whereby small hospitals in many areas of the state are being linked, through telephone line transmission, with larger centers for continuous ECG monitoring and consultation. Thus a patient in a non-urban area can receive highly specialized supervision and care immediately, in his home community, without losing valuable time being transported to a major city. More about this project later as it develops, but equipment is being installed as rapidly as it is received, and an increasing number of community hospitals which, because of budget cutbacks, had to be dropped from the network as originally projected are coming into the system at their own expense. Doctor Charles Robinson is now the full-time Director of the ORMP Coronary Care Project.

A consideration of at least equal importance in reducing mortality from acute myocardial infarction is, it seems to me, that of reducing the time delay in providing adequate emergency treatment for these patients. What is done for them within the first few minutes and hours is so often crucial. Currently underway in several of the major cities are experiments with specially equipped cardiac ambulances, helicopter evacuation, special training of ambulance, fire and police personnel, of ECG telemetering and other communications systems allocated specifically for cardiac emergencies. Meanwhile it behooves us to look into the procedures at all our hospitals for the emergency admission of these patients to insure that unnecessary delays are not entailed in getting them directly to the coronary care units. Clearly, these patients are high-priority, genuine emergencies. The new knowledge which we

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have gained from continuous monitoring, demonstrating that most of them do manifest potentially lethal or warning arrhythmias at some stage of their acute illness, underscores the importance of having enough well equipped and well staffed CCUs strategically located throughout Oklahoma if all these patients are to have truly modern cardiac care when they need it most.

### Just To Keep the Record Straight

A word of clarification about some recent newspaper publicity is in order. During September of this year newspapers all over the country carried several releases to the effect that the Nixon Administration is cutting back and plans to terminate several long-standing projects entailing research and patient care in the fields of heart disease, cancer, and other major health problems. At least some who read those announcements (and perhaps more of you than we suspect) misconstrued them to mean further retrenchment or actual demise of Regional Medical Programs. That is entirely understandable in view of our concentration in the fields of heart disease, cancer, and stroke. The differentiation should be made clear, however, that these recent announcements apply to the old "Chronic Disease Programs" of the National Institutes of Health, not to RMP, and are part of widespread cuts of the \$3.5 billion slash in the federal budget ordered by President Nixon in his fight against inflation. They entail for the most part the closing of several field stations in other states and perhaps some reallocation of funds and responsibilities within the Department of Health, Education, and Welfare. Unfortunately this differentiation was not made clear in the news accounts.

### National Trends in RMP

Presently there are under active consideration on the national scene several changes in both the basic objectives and the modus operandi of Regional Medical Programs. Almost

certainly there is developing a trend away from simple project grants with all their ponderous machinery of applications, review, site visits, and sometimes inordinant delays, to a more streamlined and flexible type of grant allocation reposing greater authority and control in local Advisory Groups. Also there are mounting pressures for improving our health services to the poor, and certain inequalities of distribution of medical care among various socioeconomic groups of our country are coming under greater scrutiny. The contention is being heard that a disproportionate amount of our health dollars are going into nursing homes where the average patient's stay is four years and the end result usually demise of the patient, rather than into the needy youth whose productive years lie before them. Almost certainly these considerations will carry more and more weight in future decisions on grant allocations to regions. Yet another avowed goal of the Nixon Administration is that of greater decentralization of HEW. Just what that may mean to the 55 regions of the United States, which may be called upon increasingly for a broader range of activities and responsibilities as funds are channeled more and more to the local level, remains to be seen. You will be apprised of these trends as they develop.

Meanwhile our objectives in Oklahoma are clear. We will be judged in the final analysis by the contributions we make to an already progressive and renowned health care system. To alter it constructively is not simply a matter of funding or equipment, certainly not one of legislation alone. It is definitely a matter of achieving greater cooperation and true collaboration at all levels of the system in our common goal, that of improving medical care throughout Oklahoma. □

## Rubella Vaccine Recommendations From the AMA

### Background Information

While rubella (German Measles)

is generally a mild disease when contracted during childhood, in post-pubertal individuals, particularly females, there is considerably greater potential for harm. The illness is often more serious and prolonged and not infrequently has complications such as arthritis, arthralgia, and rarely, encephalitis. In addition, when rubella is present during pregnancy, especially during the first trimester of pregnancy, but also during the second trimester, from 15 percent to 35 percent of the infants may be born with what is now known as the congenital rubella syndrome. This includes partial or total loss of hearing or vision, major heart defects, mental retardation or combinations of these defects. In addition, there is a significantly increased proportion of miscarriages and stillbirths. Thus, serious transplacental damage is done by the virus.

The incidence of rubella shows a seasonal increase in the spring, generally during March, April, and May, in the United States, and these seasonal increases, in turn, have superimposed on them major national and international (increases) epidemics occurring at irregular intervals of from approximately six to nine years each. During the last 40 years, there were three exceptionally high pandemic peaks that occurred about 1934 and 1935, 1942 and 1943, and 1964.

The primary goal of rubella vaccination is the prevention of the congenital rubella syndrome, with secondary goals of preventing rubella in postpubertal patients where disabilities are usually more serious than the relatively mild disease that it causes in young children.

### Vaccine Development

In June, 1969, the first rubella vaccine was licensed in the United States. This was an attenuated live virus, manufactured by Merck, Sharp and Dohme. It is made from the HPV-77 strain that has been grown on duck embryo cell culture. This vaccine was tested on over 13,000 susceptible children prior to licensing, with essentially no adverse reactions, although transient arthralgia or arthritis and rash did occasionally occur in older patients.



Smith, Kline and French are currently manufacturing an attenuated live virus rubella vaccine from a different strain (Cendehill). This is grown on rabbit kidney cell culture in Belgium and probably will be licensed in the near future in the United States. There is a similar expectation for an attenuated live virus vaccine that has been grown on dog-kidney cell culture by Philips-Roxane. In addition, experimental work is progressing at the Wistar Institute in Philadelphia with a still different virus strain (WI-38), which is being grown on human embryo lung cell culture (Diploid cell). Thus, it is very likely that prior to the next seasonal peak, which would be anticipated in spring, 1970, millions of doses of at least three different rubella vaccines will be available for use in the United States.

It is known that, following vaccination, virus particles are shed from the nasopharynx and uterine cervix. However, there have been no reports of cases of rubella as a consequence of the shedding.

#### Vaccine Administration

The currently licensed vaccine is administered by a single subcutaneous injection of reconstituted lyophilized vaccine. The label and insert instructions should be carefully read and followed. The following precautions are recommended.

**Pregnant women must not be given the vaccine** because the viremia that follows vaccination and lasts two to six weeks may permit the virus to pass the placental barrier and affect the growing fetus.

If vaccination of a nonpregnant woman in the childbearing age is anticipated, special safeguards should be taken. These might include testing the woman to make sure she is not already immune to rubella\* and would include carefully weighing the advantages of vaccine administration against the disadvantages, including the possibility of her becoming preg-

nant, with the likelihood that the fetus might miscarry or develop the congenital rubella syndrome. If the physician believes that vaccination is desirable, he should prescribe a medically acceptable method for contraception and should explain the potential risk of becoming pregnant to the patient, and, preferably, obtain written, informed consent for the vaccination.

Because of the possibility of placental transfer of maternal immune bodies and the likelihood of these interfering with the development of immunity following vaccination, it is recommended that the vaccine not be administered to children under one year of age. The presence of other virus diseases or any febrile active generalized infection, as well as the use of corticosteroids, irradiation, alkylating agents or antimetabolites or other agents that would weaken the normal defense mechanisms of the individual are contraindications to the use of rubella vaccine. Other contraindications include concurrent use of a different live virus vaccine (eg measles or poliomyelitis). Administration of the rubella vaccine should then be deferred for at least four to six weeks.

For the Merck, Sharp and Dohme vaccine (Lyovac-Meruvax), epinephrine should be available for immediate use in case of an anaphylactoid reaction. The vaccine (which is grown on duck embryo cell culture) should not be given to individuals who are sensitive to duck or chicken eggs or feathers and, inasmuch as each dose of the reconstituted vaccine contains 25 micrograms of neomycin, individuals sensitive to this drug should not receive vaccine.

#### General Recommendations

Inasmuch as the vaccine currently available in the United States is still relatively new (about 13,000 susceptible children had been observed for adverse reactions prior to licensing), it is possible that unanticipated adverse reactions, particularly in older patients, may occur with the general use of the vaccine. Therefore, it is recommended that any serious ad-

verse reactions be reported promptly to the State Health Department and to the manufacturer who is responsible for reporting it to the Division of Biologic Standards of the National Institutes of Health.

While the frequency of naturally acquired immunity varies considerably with the age of the patient and the incidence and prevalence of the disease in a particular community, the National Communicable Disease Center estimates that about 15 percent of the children under five years of age have become immune through naturally acquired disease, and that for the other age groups the respective natural immunity levels are approximately 35 percent for the five to nine year olds, 60 percent for the ten to 14 year olds, 75 percent for the 15 to 19 year olds, and 85 percent to 90 percent for those 20 to 39 years old.

These figures vary from community to community, but may be used as a general guide for the desirability of performing screening tests for susceptibility prior to giving the vaccine. However, each person should be evaluated on an individual basis whenever possible.

For widespread use, in view of the lack of adverse reactions in small children and the fact that about two-thirds of the children under ten would be susceptible, all should receive the vaccine without doing a preliminary serological test for susceptibility. Children in kindergarten and the early grades of elementary school deserve initial priority for vaccination because they are commonly the major source of virus dissemination in the community. A history of rubella illness is usually not reliable enough to exclude children from immunization.

In view of the fact that circumstances will differ in various localities, it is recommended that group programs and public health programs should be launched on the basis of a coordinated plan, developed jointly by state and local public health agencies in cooperation with state and local medical and osteopathic associations. □

\*The only reliable evidence of immunity is a positive serological test. However, because of the variation among reagents and technical procedures, results of serological tests should be accepted only from laboratories of recognized competency that regularly perform these tests.



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For additional information and/or interview, contact Thomas J. Fritzlen, M.D., St. Mary's Hospital, 101 Memorial Drive, Kansas City, Missouri 64108, Plaza 3-5700.

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Breakfast Roundtable Conferences, Clinical Workshops, Panel Discussions, Television, Medical Motion Pictures, and hundreds of Scientific and Industrial Exhibits to show you the latest in equipment, services, and drugs are some of the means of keeping up-to-date in medicine.

Be sure to look for the complete scientific program, plus forms for advance registration and hotel accommodations in the October 20th issue of JAMA.



Dear Auxiliary Members:

Beautiful Indian Summer seems to detain itself, endeavoring to make all concerned a bit sad that vacation has gone until another glorious Oklahoma Spring brings the lazy days once more.



Mrs. Virgil Ray  
Forester

One has only to gaze out the window and see the path to the school room being trodden daily by young America, to realize that summer is over and we must be about our work.

Let us protect our children from the many hazards confronting them for safety's sake.

As adults, we must use caution in driving, watching for school zones and crossings. "Be a Defensive Driver." Also, teach your child the safety laws by which he must abide. Does he know the art of safety and its rules concerning his bicycle? Remember your child is precious cargo. Protect him.

Let us be concerned with the Mental Health of children. In keeping with the theme "Accent On Youth," the National Mental Health Committee, this year, is emphasizing mental health of children.

It is imperative for us to determine the greatest mental health needs of the children in our community and where we can best serve.

If children in need of care in their formative years, can be reached, there will not be the cost in services and money later.

The Head Start program was organized for this reason and prepared for Kindergarten and first grade children who, because of a background of deprivation, are not ready to learn in school.

The National Congress of Parents and Teachers has started a program on the emotional health of children.

The National Association for Mental Health has tried to educate the Community in family, mental health problems. If we

all work together, there should be happier prospects for the children of the 1970's.

Travel seems to be the theme song for our competent president, Mrs. J. Hartwell Dunn, (Edna), for she is constantly up, up and away over each highway, the auxiliary way, in her famous auxiliary vehicle which was launched and christened in such a fantastic way when steering our own 1969-1970 course became the order of her day in May.

First assistant navigator, Mrs. William M. Leebron, our capable president-elect is always at the driver's side ready to assist in any way—as our two skilled vice-presidents, Mrs. Harlan Thomas and Mrs. E. Cotter Murray create enthusiasm in the membership drive.

Our proficient program chairman, Mrs. Scott Hendren, charts the auxiliary course while perfectionist, Mrs. Ben Gaston, secretary, records it all as dexterous Mrs. Richard Price, treasurer, writes checks for sums tall and small.

Sometimes others of us in the crew are among the famous visiting few.

Warm hospitality displayed by county groups makes our auxiliary trips solid bliss.

"Stop overs" our president has made and will make on the auxiliary tour accompanied by one or more and scheduled places "yet to go" are:

Bartlesville, Ponca City, Enid, Muskogee and Durant during September.

McAlester, Norman and Shawnee during October with Tulsa in November and Ada next February.

Good luck and God's speed to the auxiliary vehicle with best wishes for many more safe miles for our president and her fellow crew.

Always best in auxiliary,  
MRS. VIRGIL RAY FORESTER  
(Zellie) ☐



**Universal health insurance seems to be the politically popular thing.** Everyone has a plan or is helping someone else work one up. New York Governor Rockefeller and Senator Jacob Javits have joined forces in the growing rush toward national health insurance. Formerly they both had been working on separate legislative proposals, now they will work together on a single proposal which Javits hopes to introduce early next year. Walter Reuther, United Auto Workers Chief, predicts that his plan will be ready for introduction early next year also.

**AMA's Medigredit has been presented to the House Ways and Means Committee.** Medigredit would not affect the present medicare program for those 65 or older, but would utilize a system of federal income tax credits to those individuals and families who purchase qualified health coverage from *approved private insurance companies or plans*. Russel B. Roth, M.D., Speaker of the AMA House of Delegates, testified that a person's federal tax liability would act as an index as to what share of the cost of his health insurance premium would be borne by the federal government and how much would be paid by the individual. Those persons in the bottom 30 percent of taxpayers have health insurance protection provided them without cost. AMA's plan would cost \$11 to 12 billion annually, while Reuther's plan is estimated by him to cost \$40 billion.

**Latest figures released by Blue Cross and Blue Shield** show Blue Cross membership in 75 U. S. plans grew to 68.5 million in 1968 and Blue Shield membership in 72 plans totalled 60.3 million. Blue Cross membership

represents 34.2 percent of the U. S. population and Blue Shield represents 27.9 percent.

**Health manpower shortage is at the heart of many problems in the health field.** Ten medical schools now have physician's assistant programs underway or in a planning stage. The first physician assistant graduates of Duke Medical School are now employed by M.D.'s at salaries averaging \$10,000.

**President's "device" study was revealed to the Congress** in his message on consumer affairs and protection. President Nixon said, "Another important medical safety problem concerns medical devices—equipment ranging from contact lenses and hearing aids to artificial valves which are implanted in the body. Certain minimum standards should be established for such devices; the government should be given additional authority to require pre-marketing clearance in certain cases. The scope and nature of any legislation in this area must be carefully considered, and the Department of HEW is undertaking a thorough study of medical device regulation. I will receive the results of that study early in 1970." . . . As yet, no legislation implementing the president's recommendation has been introduced.

**HEW building postponed.** Secretary Robert Finch of HEW has decided to set aside plans for a \$40 million department headquarters building because of the cost. Federal construction projects are handled through the general services administration. Finch reportedly told them that even though he needs the building, a combination of inflation and unusual design pushed the estimated cost beyond the breaking point. HEW is presently headquartered in the old Federal Security Administration Building with additional offices scattered in about a dozen other buildings in the Washington area. □



The

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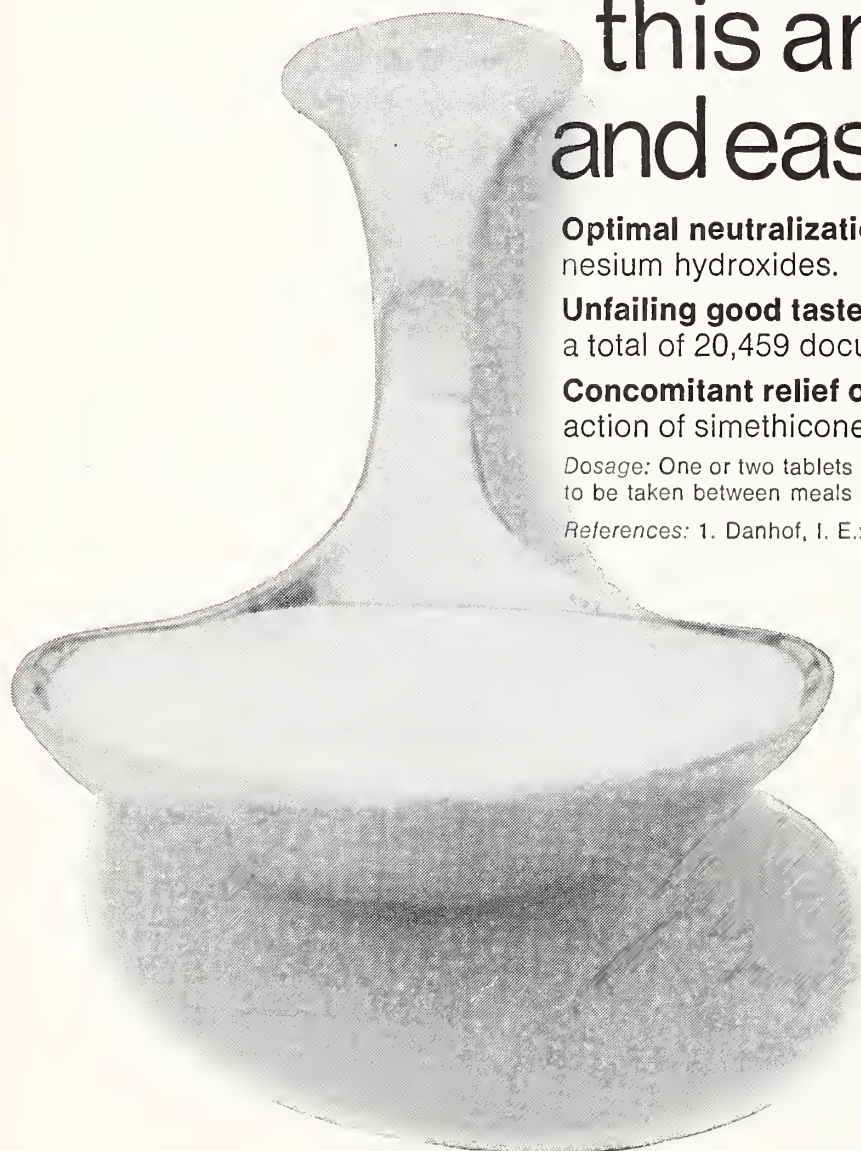
*Dosage:* One or two tablets (well chewed or allowed to dissolve in the mouth); one or two teaspoonfuls to be taken between meals and at bedtime, or as directed by physician.

*References:* 1. Danhof, I. E.: Report on file. 2. Hoon, J. R.: Arch. Surg. 93:467 (Sept.) 1966.

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## *The Third Division*

**M**OST PHYSICIANS recognize and understand the importance of the two classical divisions of medical knowledge, the science of medicine and the art of medicine. Much emphasis is placed on maintaining competence in each of these divisions through reading and practice. Sir William Osler observed that exclusive attention to books or patients was as unrewarding as it was hazardous. The education of every student of medicine embraces hundreds of hours devoted to each of these divisions. Customarily, the physician who develops and maintains a balanced competence in the science and art of medicine is acknowledged as a complete physician. He represents an ideal.

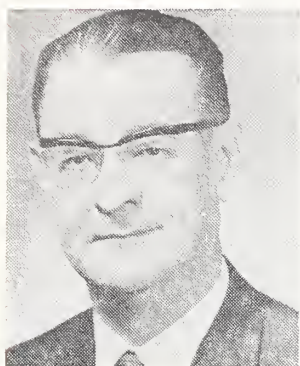
But what of a third division of medical knowledge? Is there one which, in its equality of importance, adds a third dimension to the world of books and patients? Indeed, the history of medicine provides the very foundation of the other divisions; it is the bridge between their frontiers and their societies. It is of such importance that Osler advised the young men of the New York Academy of Medicine to "... let the old men read new books; you read the journals and the old books..." Yet who among us recognizes and understands the importance of the history of medicine as an essential element in the education and creation of the complete physician? How many of us can claim competence in this division of medical knowledge? How many medical schools devote more than token time to studies in the history of medicine?

Our deficiencies in this area may be con-

tributing to many of the problems and frustrations we encounter in our personal and professional lives. An understanding of history lends balance to the acceleration of our technologies, direction to our progress and stability to our values. The often asked question of today's youth, "Who am I?" finds its only adequate answer in the pages of recorded history.

A review of many past issues of our *Journal* reveals that we have participated in this neglect of the history of medicine, the third division of medical knowledge. It seems proper . . . especially at this time of year when reflections and resolutions are in order . . . to pledge our efforts to rectify this neglect. To succeed in these efforts however, we must appeal to our contributors for more articles dealing with the history of medicine. As Oklahomans we still stand among the vanishing pioneers in the shadows of the frontier. Thus we have a rare opportunity to record the lore and lives of two medical cultures, Indian and settler. We must seize this opportunity and, in doing so, relieve our obligations to those who have preceded us and to those who are to follow. We urge you to join in these efforts; become a contributor to and a student of the history of our profession. The rewards will more than justify your investment of time. You will enrich your own life and those of future generations. You will become, in fact, a complete physician.—*M.R.J.* □





At Christmas time comes a pause of sorts in the lives of men in honor of the Prince of Peace, and in the cause of "peace on earth and goodwill toward men." It is at this time when we are reminded of the many blessings we enjoy, the

freedoms we have and the accomplishments we have seen—all derived from the practical application of the Christian principles upon which our country was formed. Each segment of our population, including our own profession, has prospered and developed in synergistic relationship with and in proportion to the promotion of His work.

As our work has increased and become more meaningful and important to the daily lives of our patients, so have the requirements of our organization increased in importance to us. Not only is there erosion of our money by inflation but also the responsibility and work load have increased. It will continue to do so. Our House of Delegates has wisely recognized this and, after due thought, provided a dues increase to meet the added responsibility beginning this coming year.

As I pause at this time, I can see this increasing responsibility being required of our state organization in many ways. Our special interest societies have recognized the importance of our central organization in

dealing with common problems. Third party carriers, voluntary prepayment organizations, private insurers and government, have recognized and are conferring with the state organization and are increasingly dependent upon our peer review mechanisms of county and state level. We are called upon to guide and participate in areawide health facility planning. We are asked and have accepted responsibility for studies of inequities in health manpower and in making recommendations for their correction. Certainly not the least important is the provision of leadership and incentive for continuing education of our members.

This list is only partial but does exert a sobering influence when it is noted that planning at the national level by the AMA envisions a rather drastic change in the modus operandi of that organization. Instead of reacting to the ideas that "filter up" from the grass roots, the leadership at national level would involve state and county societies in such things as socio-economic surveys, experiments in new methods of health care delivery, implementation of a "Bill of Rights" for health, and in drafting legislation related to medical care. All these and more.

Small reason that we all appropriately pause and pray for guidance, wisdom, patience, forbearance, perseverance and professional maturity in dealing with the problems that all our countrymen, who are our patients, have bestowed upon us with honor.

Sincerely yours,

*Willard E. Denyer*



## Kartagener's Syndrome in Sisters

DONALD R. RESLER, M.D.  
E. A. WALKER, JR., M.D.

*Situs inversus, pansinusitis and bronchiectasis comprise a syndrome first described by Kartagener. It has been considered by some to be a genetically linked disease and the occurrence of the disease in these two sisters would tend to lend support to this theory.*

**C**HRONIC paranasal sinusitis and bronchiectasis occur frequently in the same patient. When present, situs inversus completes a triad in which the pathologic relationships are poorly understood.

According to Maret and Miller<sup>20</sup> the presence of situs inversus and bronchiectasis in the same patient was first described by Sievert in 1904. Kartagener in 1933 collected 11 cases from the literature and added sinusitis to organ transposition and bronchial disease establishing the syndrome known by his name.

Since 1933 there have been a number of cases reported in the literature. Kartagener with Stucki<sup>14</sup> in 1962 reported that they had collected 334 case histories from the literature and presented an excellent tabulation of them.

### ETIOLOGY

The cause of this rare condition is not known but has been the subject of considerable speculation in the world literature. The process by which bronchiectasis occurs is not completely understood and it is not known why it is found so frequently associated with chronic pansinusitis. The cause of situs inversus is also in doubt.

Situs inversus is regarded by some as being a genetically inherited characteristic. Cockayne<sup>5</sup> presented a comprehensive thesis supporting the hypothesis that transposition of the viscera is a genetic trait. He concluded that it is a rare recessive and deviant trait and that developmental anomalies are more likely to occur with sinistral rather than with dextral rotation of the viscera, even when sinistral rotation is complete.

Torgersen in 1947 discussed the genetic occurrence and familial properties of this disease. He found a proportion of 6:77 which was far from the expected Mendelian ratio of 3:1. He stated, "These facts are not indicative of the dominant gene or genes causing bronchiectasis and nasal polyps, and a recessive gene causing transposition, being linked."

Torgersen believed that his investigations indicated the reverse of Cockayne and that the gene or genes causing bronchiectasis and nasal polyps may sometimes cause transpo-



## Syndrome / RESLER, WALKER

sition of viscera. He also believes that it is probable that the variations in the manifestations of bronchiectasis and nasal polyps may depend on the interplay of several genes.

It is the opinion of Brown and Smith<sup>1</sup> that "the most acceptable hypothesis at the present time is that the disease is due to a gene or genes which cause overt disease in homozygotes and which give partial or no expression of the order in heterozygotes."

There are several reports in the literature describing multiple cases of Kartagener's Syndrome in the same family.<sup>3, 10, 13, 16, 26</sup>

Kartagener's Syndrome has been found concurrent with other diseases such as mucoviscidosis, renal anomalies, congenital malformations of the heart, familial changes of the eye, brain abscess, and with lymphosarcoma.<sup>4, 12, 21, 28</sup>

### REPORT OF CASES

#### *First Case:*

This Caucasian female was first seen on 4-4-50 at age 32. She gave a history of having had hay fever most of her life with "sinus trouble" and nasal polyps. Skin tests in 1942 revealed a sensitivity to a number of allergens. She gave a history of chronic postnasal discharge, chronic cough and of producing a cupful of sputum each day.

Physical examination revealed her heart to be on the right side of her chest.

A radiograph of the chest on 4-4-50 showed increased lung markings extending from the lower part of the hilum on the left toward the base. The heart shadow was reversed.

Radiographs including a bronchogram made on 1-25-51 revealed three lobes on the left side of the chest and two on the right (Figure 1). Each lower lobe showed moderately severe bronchiectasis, each upper and the middle lobe on the left were free of evidence of disease. The lower lobe on the right was unusually contracted.

On 10-12-56 a radiograph of the abdomen revealed the liver shadow to be on the left and the gastric bubble on the right. Radiographs of the paranasal sinuses exhibited severe chronic sinusitis involving both antra, the cavities being almost totally opaque.

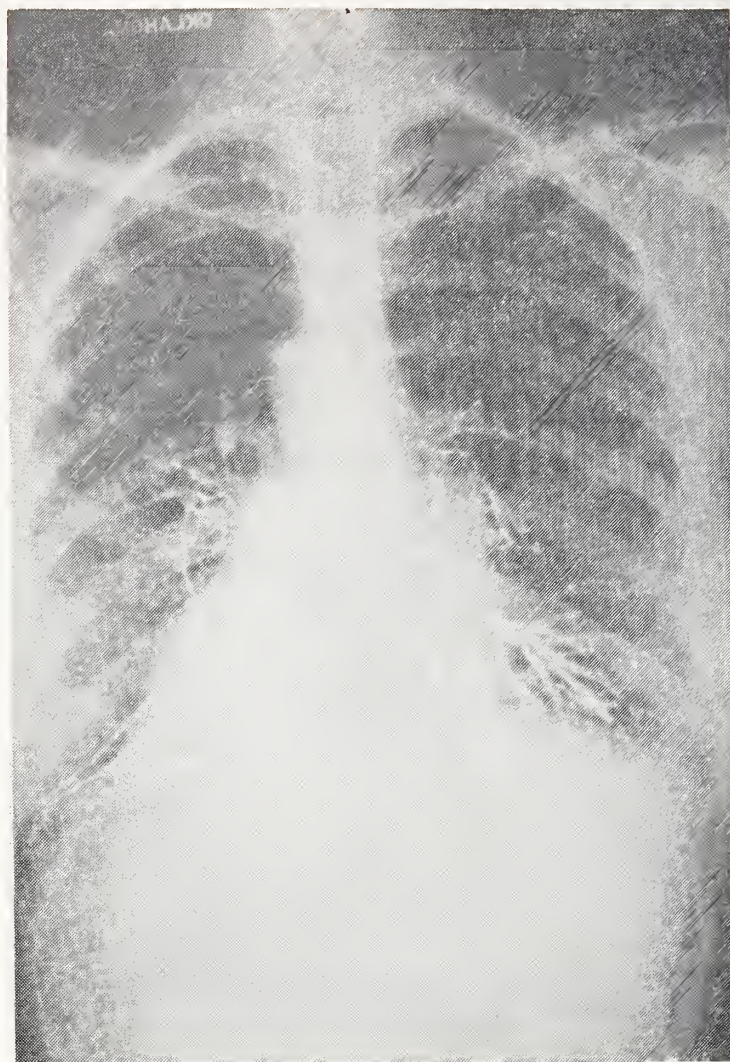


Figure 1. Bronchogram in Case #1 showing extensive bronchiectasis in the lower lobe on the left side.

There was chronic disease of the ethmoid sinuses (Figure 2). The frontal sinuses

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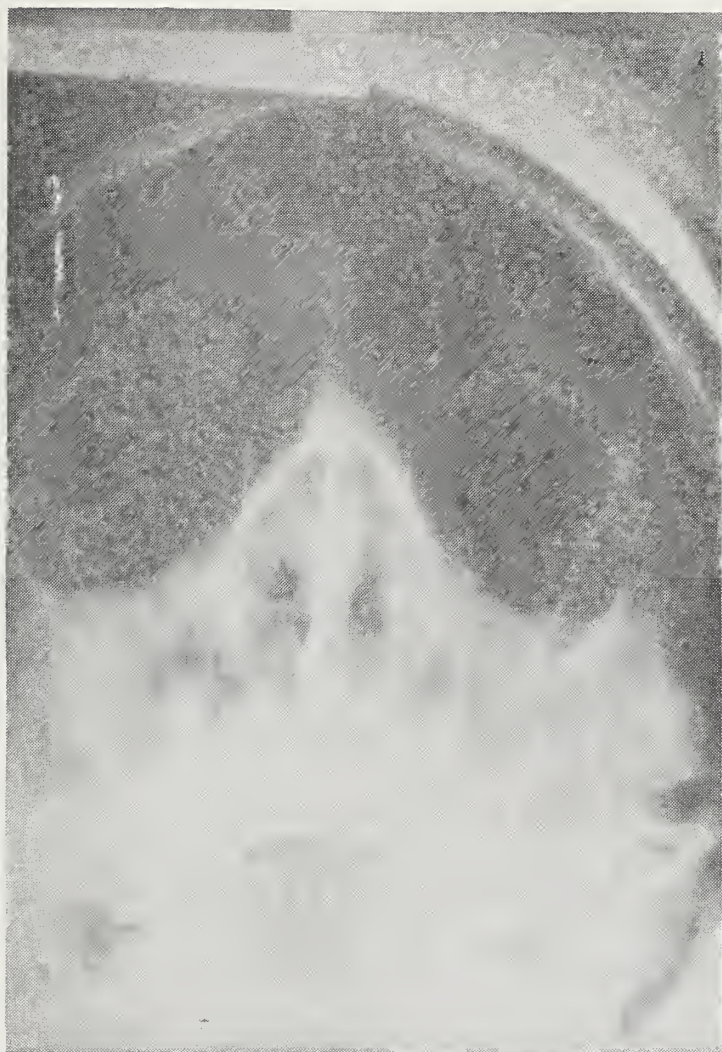


Figure 2. Water's view of the paranasal sinuses in Case #1 showing extensive bilateral maxillary sinusitis. Note the presence of frontal sinuses in this patient.

were present and clear. The sphenoid sinuses were very small but also diseased.

Radiographic examinations of the chest on 11-5-57, 1-6-59 and 7-9-62 revealed the same findings, with the addition that there was an extensive peribronchial infiltrate in the lung base on the left adjacent to the heart shadow. The lung on the right appeared clear.

An electrocardiogram on 1-6-59 was recorded as being completely normal excepting for dextrocardia.

#### *Second Case:*

This Caucasian female, a sister of the first case, was first seen on 3-5-56 when she was 47 years of age. Her chief complaint was "sinus trouble." Polyps had been removed from her nose on two occasions.

Examination revealed polypoid degeneration of both middle turbinates and polyps in each middle meatus. There was a large amount of mucopurulent material in each nasal fossa and the frontal and maxillary sinuses did not transilluminate.

Radiographs of the chest revealed an infiltration in the left base with moderate pleural reaction which obscured the apex of the heart and left dome of the diaphragm. There were two areas of density in the right base adjacent to the border of the heart. One of these was translucent suggesting an abscess or a bronchiectasis cavity. A subsequent radiograph of the chest revealed dextrocardia which had been overlooked on the first films.

Radiographs of the paranasal sinuses revealed an absence of the frontal sinuses. The other sinuses showed extensive chronic sinusitis (Figure 3).

An electrocardiogram revealed dextrocardia, non-specific primary T-wave changes and sinus tachycardia. She was evaluated medically and 50 ml. of purulent sputum were obtained in a 24-hour period. She was placed on medical treatment for her bronchial infection.

Polyps removed from her nose on 3-10-56 contained many inflammatory cells and numerous eosinophiles mixed with inflammatory exudate. There was no evidence of malignancy.

A bronchogram was performed on 5-25-56. The basilar segmental bronchi were filled with contrast media on both sides and showed moderate tubular and saccular bronchiectasis. The upper lobes and segmental bronchi were not well visualized (Figure 4).

On 3-16-60 bronchoscopy revealed pus bilaterally in the basilar segmental bronchi. It was thought that the area of greatest involvement was in the left lower lobe and lingula located in the right chest. On 3-23-60 a right thoracotomy was performed with resection of the transposed lower lobe and lingula. The patient recovered normally.

Microscopic examination of the tissue removed at thoracotomy revealed marked focal fibrosis especially beneath the pleura. Fibrosis was observed frequently around the blood vessels and around dilated bronchi. In the bronchi the epithelial lining appeared normal but the lamina contained inflammatory exudate. Inflammation was seen throughout all sections being most prominent in the walls of the bronchi. The impression of the microscopist was "marked bronchiectasis associated with pulmonary fibrosis."

A radiograph of the chest on 4-7-60 re-



was not symptomatic and was satisfactorily managed by diet without medication.

#### DISCUSSION

The diagnosis of Kartagener's Syndrome is based on the discovery of a triad of diseases and abnormalities in the same patient, i.e., situs inversus, bronchiectasis, and pansinusitis. To this some authors<sup>31</sup> have added nasal polyps. One other author<sup>6</sup> added absence of the frontal sinuses to this syndrome, but this is not a consistent finding as can be noted in our first case (Figure 2).

The diagnosis of sinusitis is made by physical and radiological examination of the patient. The radiographs of the paranasal sinuses will reveal the diffuse clouding characteristic of this disease (Figures 2 and 3). Diagnosis of situs inversus can be suspected from physical examination of the chest or by electrocardiogram, but confirmation rests on the radiographic findings of dextrocardia plus transposition of the abdominal viscera.



Figure 3. Water's view of the paranasal sinuses in Case #2 showing extensive bilateral maxillary sinusitis. Note the absence of frontal sinuses in this case.

vealed pleural reaction in the right base; the left base was clear except for a small streak of atelectasis and the increased markings.

A bronchogram was performed on 9-16-60. The upper lobe on the right was fairly well outlined and appeared normal. Each of the segmental bronchi of the lower lobe on the left showed moderately severe bronchiectasis.

The middle lobe on the left showed evidence of minimal dilatation involving the inferior segment. The upper lobe on the left appeared normal.

A plain film of the abdomen on 12-7-60 revealed situs inversus with the liver shadow on the left and the stomach on the right. The liver seemed moderately enlarged and extended three cm. below the crest of the ilium.

Subsequent radiographs of the chest have shown persistent heavy peribronchial markings in the left base with little change.

On 11-6-64 a three-hour glucose tolerance test revealed diabetes mellitus. The patient



Figure 4. Bronchogram in Case #2 showing extensive bilateral lower lobe bronchiectasis and dextrocardia.



Characteristic dilatation of the bronchi observed on the bronchogram will provide the diagnosis of bronchiectasis; however, this can be suspected from the history and from the appearance of the sputum.

That this is an hereditary factor in Kartagener's Syndrome can no longer be doubted as the reports in the literature will attest. The two sisters reported here have three other siblings, none with situs inversus. One of them, a male, has been treated by us for nasal polyposis.

The treatment of Kartagener's Syndrome is limited to medical and surgical care of the paranasal sinusitis and the bronchiectasis. Surgical procedures on the bronchi and lungs are complicated technically by the fact that the right and left lungs are transposed, as was noted in the second case report.

CONCLUSIONS

- 1. Kartagener's Syndrome is a moderately rare condition comprising chronic pansinusitis, bronchiectasis, and situs inversus.
- 2. Two patients, sisters, with Kartagener's Syndrome are reported here. □

NOTE:

The thoracotomy and pulmonary resection were performed on the second patient by Edward R. Munnell, M.D., of the Oklahoma City Clinic

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# Treatment of Shock

## Following Myocardial Infarction

JAY N. COHN, M.D.

*The varied mechanisms and manifestations of shock with myocardial infarction have considerable importance in selecting treatment and monitoring the response to therapy.*

INTRODUCTION by Thomas A. Bruce, M.D., Head, Cardiovascular Section, University of Oklahoma Medical Center.

*This short review article by Doctor Jay Cohn at Georgetown seems pertinent to physicians throughout Oklahoma.*

*As we become increasingly concerned about intensive cardiac care in our hospitals, the management of shock becomes a critical determinant in survival. We cannot assume that shock means an unusually large zone of infarction is present or that there is extensive previous myocardial scarring, for patients frequently have excellent cardiac reserve after recovery. In these instances we can only presume that a temporary metabolic or neurogenic mechanism has lead to a defective performance in the "good" heart muscle or in the peripheral vascular bed.*

*As our understanding of cardiogenic shock has changed, so has management. For instance, the old standby drug Norepinephrine (Levophed) seems now to be rarely indicated. Plasma expanders such as whole blood or dextran, formerly taboo in acute myocardial infarction, are considered to be of value in as many as 25 percent of patients with post-infarction shock (those with a low central venous*

*pressure.) Moreover, there is increasing evidence that good early care pays off handsomely in reducing the prevalence of shock. Key ingredients are proper control of pain, hypoxemia and acidosis, adequate rest, vigorous early treatment of congestive failure and arrhythmia prophylaxis. This article reviews the main concepts in diagnosis and the rationale for therapy.*

**W**HILE NEWER refinements in patient monitoring and management have significantly reduced the mortality from acute myocardial infarction, the occurrence of shock still carries a grave prognosis. Once shock develops the survival of the patient is entirely dependent on the perception, attentiveness and judgment of his physician.

Shock is characterized by a critical reduction in tissue perfusion. Inadequacy of blood flow impairs organ function and disrupts the integrity of normal metabolic pathways. If shock is not promptly corrected, the flow deficiency leads to organ damage, metabolic acidosis and a vicious circle resulting in progressive circulatory deterioration and death. The sooner the syndrome can be recognized the more likely is therapy to be effective. The need for prompt recognition of shock must not, however, be satisfied at the expense of "over-diagnosis." It is in this initial evaluation that the physician's perceptiveness is critical. He must be able to recognize the difference between the mildly hypotensive patient who is adequately perfusing his tissues (and needs no immediate treatment) and the patient who is in the



incipient stages of shock and requires prompt therapy to restore peripheral blood flow.

In considering the diagnosis of shock attention should be given to the following signs:

1. *Skin temperature*: Warm skin indicates adequate cutaneous blood flow and usually a fairly well maintained cardiac output. Cool, clammy skin indicates sympathoadrenal discharge, a sign of reflex vasoconstriction in response to a fall in cardiac output.

2. *Peripheral pulses*: Thready or absent brachial and radial pulses indicate either severe hypotension or more often intense vasoconstriction. In either case urgent treatment is indicated. Femoral artery pulsation will be very weak if the patient is hypotensive but the pulsations are bounding in the presence of peripheral vasoconstriction.

3. *Auscultatory blood pressure*: This is not a reliable guide to intra-arterial pressure in shock. A low cuff pressure has the same significance as weak upper extremity pulses. However, an absent auscultatory pressure usually indicates inadequate blood flow and the need for treatment.

4. *Mentation*: If the patient is alert and responsive cerebral blood flow is probably adequate. Agitation, confusion or somnolence are signs of deficient cerebral blood flow and usually are associated with a fall in arterial pressure.

5. *Urine output*: Urine flow less than 20 ml/hour with a low urine sodium concentration is evidence of inadequate renal blood flow which, if not corrected, can lead to tubular necrosis.

6. *Cardiac function*: Persistent or recurrent chest pain or arrhythmias in the pres-

ence of other signs of hypotension may be accepted as presumptive evidence of functional impairment of coronary blood flow.

7. *Acidosis*: Low arterial blood pH and elevated blood lactate mean reduced tissue oxygenation. Arterial blood gas and pH studies are invaluable in the management of patients in shock.

The presence of one or more of the above signs of inadequate tissue blood flow in a patient with an acute myocardial infarction is presumptive evidence of shock. Mild hypotension in the absence of any of these signs should not be diagnosed or treated as "shock."

When the diagnosis of shock has been made, several questions regarding the hemodynamic status of the patient should be answered before definitive treatment can be instituted:

1. *Is the patient severely hypotensive?* Hypotension is an immediate threat to life because of the associated impairment in cerebral and coronary blood flow. Since the cuff pressure may be low even though arterial pressure is normal, the strength of femoral arterial pulsations often is a more reliable guide to blood pressure. In some patients direct recording of arterial pressure may be necessary.

2. *Is blood volume adequate?* Some patients become hypovolemic in the hours following an acute myocardial infarction and the reduction in plasma volume may then become an important factor in the genesis of shock. The central venous pressure (CVP) is a vital guide to the adequacy of circulating volume and should be monitored in all patients with shock. This can be accomplished by threading a catheter through a needle in the brachial, femoral or subclavian vein and advancing it into the thorax. A low CVP (less than 6 cm H<sub>2</sub>O with the zero level at the mid-chest) is an indication for a trial of volume expansion. In myocardial infarction the left ventricle often is in failure while CVP is normal. Therefore, volume expansion should be carried out cautiously. A rise in CVP of more than 2 cm. H<sub>2</sub>O during infusion of dextran, saline or other fluid indicates that volume has been adequately restored. If shock is not corrected by volume expansion the presence of sig-

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nificant left ventricular failure can be assumed.

3. *Is cardiac function severely impaired?* If peripheral blood flow is markedly reduced and the CVP is high, then myocardial failure is obviously an important factor in the shock. Heart rate is not a very useful index of cardiac function. Indicator dilution cardiac output data are of value in the evaluation of myocardial function in selected cases.

4. *What is the status of the peripheral vessels?* Is there evidence of intense sympathetic discharge? This usually is manifested by cutaneous vasoconstriction and indicates renal vasoconstriction as well. In early stages of shock peripheral constriction may support fairly normal arterial pressure despite progressive tissue hypoperfusion and lactic acidosis.

The purpose of therapy in shock is to restore adequate organ perfusion. Effective therapy must be based not only on an understanding of the physiological disturbance in the individual patient but also on a thorough understanding of the pharmacological action of the useful drugs.

The following drugs may be valuable in certain patients with cardiogenic shock:

1. *Isoproterenol*: This is a catecholamine with pure beta adrenergic activity; that is, it stimulates the heart and dilates peripheral vessels. It is probably the agent of choice when impairment of cardiac function has led to severe reduction in cardiac output, especially when reflex vasoconstriction is present. Isoproterenol one or two milligrams should be diluted in 500 ml five percent dextrose in water and the rate of infusion gradually increased until the signs of shock are corrected or cardiac rhythm disturbance limits further administration. In some cases the concentration of isoproterenol must be increased as much as 2 mg/100 ml to obtain a satisfactory effect. Lidocaine may be effective in controlling ventricular irritability during isoproterenol infusion. In some hypotensive patients isoproterenol will not significantly increase arterial pressure and cerebral and coronary perfusion are not improved. In this situation a vasoconstrictor-inotropic agent may be necessary.

2. *Levarterenol (Norepinephrine)* or

*metaraminol*: These drugs have an alpha adrenergic effect (vasoconstrictor) on peripheral vessels combined with myocardial stimulating properties. Because these drugs may reduce renal and splanchnic blood flow they should be used only when isoproterenol is ineffective. The infusion rate should be the smallest amount necessary to increase systolic arterial pressure over 100 mm Hg.

3. *Digitalis*: The cardiac glycosides have inotropic effects less potent than the catecholamines. They also have vasoconstrictive properties when used intravenously. It is probably best to treat cardiogenic shock acutely with the adrenergic inotropic drugs above and to administer digitalis orally for its more sustained effect.

4. *Atropine*: If shock is associated with sinus bradycardia, one milligram atropine intravenously may be effective in restoring heart rate and blood flow. Drugs, such as atropine and isoproterenol, which result in an increase in atrial rate must be used cautiously in the presence of atrioventricular block. Under these circumstances, an increase in atrial rate may result in a decrease in ventricular rate.

5. *Furosemide*: This potent diuretic can help establish urine output in the oliguric patient. After shock has been treated with the vasoactive compounds above a diuretic response to intravenous infusion of 200 mg of furosemide indicates that renal perfusion is adequate. If oliguria persists, however, more aggressive attempts to improve blood flow are necessary.

6. *Sodium Bicarbonate*: If the arterial pH is less than 7.35, sodium bicarbonate should be administered in amounts adequate to restore pH to above that level. Treatment should be initiated with 40-100 meq sodium bicarbonate and further alkali therapy based on arterial blood pH measurements.

7. *Ventricular Pacing*: If shock and marked bradycardia co-exist, increase in ventricular rate via catheter electrode pacing is often of great clinical benefit.

Newer pharmacological approaches such as the use of sympathetic blocking agents and other inotropic drugs, such as dopamine and glucagon, are still in the experimental stage.

Effective management of shock requires not only initiation of the correct therapy in



the correct amounts, but also close continuous monitoring of cardiovascular function. Adrenergic drugs should be weaned and discontinued as soon as possible. Blood volume may be inadequate after cardiac function is improved, and a falling CVP may be an indication for administration of dextran, even in patients who have manifested heart failure only a few hours before. If rhythm disturbances persist electrical pacing through a transvenous pacemaker may help improve peripheral blood flow.

It is clear that intelligent use of the means currently available can be effective in salvaging many patients who would otherwise succumb to cardiogenic shock. In others, however, the impairment in cardiac performance is so severe that medical therapy is ineffective. In this selected group of patients mechanical means of temporary circulatory support may eventually become an important adjunct to management. ☐

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## Tumor Clinic Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.\*

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### CASE No. 21: Squamous Cell Carcinoma of the Nose

**PRESENTATION:** The patient is a 53-year-old white male, who was in good health until approximately seven years ago, when he noted a small lesion on the bridge of his nose. He went to his physician, who cauterized the lesion. Approximately one year later the lesion reappeared and he went to another physician who performed a local excision. Over the next six years he had a recurrence of this lesion every eight to 12 months. At times these resections required skin grafts. One year ago he was referred to the Veter-

an's Administration Hospital. Several biopsies were taken of the lesion and these were reported to show squamous cell carcinoma. At that time, a radical excision of the lesion was performed, and the margins superiorly and laterally, and inferiorly and laterally were read as positive for squamous cell carcinoma. Four months later he returned with a mass in the right side of his neck, and a radical neck dissection was performed. Several nodes were positive. He returns now complaining of pain over the malar and cheek area of about three weeks duration. He states that the pain radiates down to his mouth.

**DOCTOR BOGARDUS:** Has this patient had any radiation therapy?

**PRESENTER:** As far as we know, he has not.

**DOCTOR CONDIT:** Any more questions about the history? What about the physical findings now?

**PRESENTER:** I palpated a node at the angle of the jaw. He also has a recurrence along the inferior margin of his nose. He's been in the hospital about two weeks and we're rather undecided about what to do with him. About five weeks ago he noted a small black ulceration on the inferior margin of his nose which has progressed very rapidly and is now almost two centimeters in diameter. It extends back into the nasopharynx. There are no other findings, except that he did have some abdominal tenderness, for which we have not found a specific cause.

**DOCTOR CONDIT:** You mentioned something about the right cheek.

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

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PRESENTER: He has a rather markedly swollen right cheek; it's extremely tender, and painful all the time. He also has a draining sinus. We're not sure where it's coming from, but he has drainage on his pillow coming from the inferior portion of his face.

DOCTOR CONDIT: Any other questions?

DOCTOR SNOW: Have any biopsies been taken of these areas recently?

PRESENTER: No sir.

DOCTOR CONDIT: This is almost a classic story for this clinic now, of lesions recurring repeatedly over a period of time being resected and cauterized and so forth. At this point in time, Doctor Snow, how would you approach this case?

DOCTOR SNOW: In view of the fact that this tumor arose in skin originally, I think surgical management is still probably the best approach for him. I would favor wide resection of the tumor in the area of the right maxillary sinus which will require resection of less than one-half of the hard palate, but will require removal of the right eye.

DOCTOR CONDIT: This would be equivalent to a radical maxillectomy, wouldn't it?

DOCTOR SNOW: Yes, I think he ought to have a radical maxillectomy. This procedure would also require the removal of the skin that is involved, and probably the advancement of a forehead flap down to repair the lip, and rehabilitation with a palatal prosthesis.

DOCTOR CONDIT: You think there's a reasonable chance of encompassing the lesion by this approach?

DOCTOR SNOW: This lesion has really responded very well to surgery in spite of the failure each time. Apparently when attempts were made at resection of this lesion there has always been some tumor in one area that wasn't removed. All of the other areas were resected. I think the same thing happened this last time. The tumor was resected adequately in all areas except one, and this one has caused trouble. He's had a radical neck dissection and no recurrence of tumor in that area. I think this tumor is amenable to surgery; it's just extremely difficult to know where the surgical margins should be. However, at the present time, this tumor has reinvaded skin, and I suspect that the tumor may be in the skin lymphatics. I

suspect that this change may be the beginning of the end for this patient. Nevertheless I think that the surgical approach is still the best one.

DOCTOR CONDIT: Will you take a large area of skin for the specimen?

DOCTOR SNOW: Yes, all that which is over the anterior mass.

DOCTOR CONDIT: Doctor Williams, do you have anything to comment about the surgical management?

DOCTOR WILLIAMS: No, I think that everyone has had the same experience. It is far from ideal. I suspect that if you talked to the people who have actually carried out this treatment there would be reasons for the incomplete operation. I would particularly like to know why they didn't re-excise the area where the pathologist found residual tumor.

DOCTOR CONDIT: A year ago, you mean?

DOCTOR WILLIAMS: Yes. Obviously the greatest problem is to decide what is tumor and what isn't, so a lot of biopsies are necessary to ascertain what has to be removed.

DOCTOR CONDIT: Doctor Bogardus, do you have any comments about the role of radiation therapy in this situation?

DOCTOR BOGARDUS: If the man could not be handled surgically, I think radiation therapy should be used in an attempt to control it. I agree with Doctor Snow, that if it is possible to encompass the lesion surgically then this is the procedure of choice. I also would contemplate preoperative radiation therapy here, but on the other hand, if you do that then we have nothing further to offer if it recurs. I think it might be better to withhold it and save the radiation therapy until we need it for a recurrence.

*FINAL DIAGNOSIS:* Recurrent squamous cell carcinoma of the nose.

*TUMOR CLINIC RECOMMENDATION:* Surgical resection of the recurrent tumor. This will probably require a radical maxillectomy. Radiation therapy can be given in the future if the tumor recurs.

CASE No. 22: Squamous Cell Carcinoma of the External Auditory Canal

PRESENTATION: The patient is a 40-year-old white male, who was first seen at



the Otolaryngologic Clinic at the Veterans Administration Hospital about three months ago. The patient presented at that time with a history that approximately two years ago he had a lesion which was diagnosed as squamous cell carcinoma of the external auditory canal on the left side. A biopsy was taken by a physician who told him at that time that it involved the cartilage of the external canal. This patient was treated primarily at that time with fulguration. The lesion recurred two months later, was re-biopsied, and once again he was told that it involved cartilage, so the patient was treated with radiation therapy. This involved a total of 4,400 r delivered in five different treatments over a three month period of time. Six months after this the patient noticed a swelling anterior to his left ear. He consulted his physician who told him that he probably had arthritis of the temporomandibular joint. The patient was seen in consultation by two physicians, and they confirmed this diagnosis and he was treated with injection of steroids into this joint. This did not relieve his symptoms, and according to the patient the tumor actually seemed to increase in size. He finally consulted a dentist who felt that the problem was not temporomandibular joint arthritis, and that he probably had a recurrence of his original tumor. Subsequently he was taken to surgery. He had a parotidectomy, and excision of a portion of the external canal and a left radical neck dissection. The postoperative course was uneventful and the patient was discharged. There was some question at that time as to whether he should receive radiation therapy.

The patient was first seen here about three months ago. At that time his examination was essentially normal with no evidence of recurrence. It was elected to follow the patient. He is now admitted with a one month history of gradual decrease of function of the facial nerve on the left side. Also he complains of paresthesias above his left ear. The pertinent findings were limited to the examination of the head and neck. He has a well healed scar from the radical neck dissection and a parotidectomy scar on the left neck. There is stenosis of the external auditory canal; the tympanic membrane can be

visualized however, and the remainder of the auditory canal and the tympanic membrane appears to be within normal limits. There is a small nodule anterior to the tragus of the left ear, which is tender to palpation. There is approximately a two centimeter mass present on the mastoid tip on the left side, which is quite tender to palpation. There is also a mass present in the right side of the neck, which is approximately 1.5 x 1.5 centimeters just lateral to the carotid bifurcation at the site of the neck dissection. The patient has a complete facial paralysis. The rest of his neurological examination is within normal limits. Five days ago he was taken to surgery and a biopsy was performed of the mass over the mastoid tip and also the mass present in the neck dissection, and both were interpreted as squamous cell carcinoma. Chest films and mastoid films have been obtained, and these have all been interpreted as within normal limits. A brain scan has also been carried out and this has been interpreted as within normal limits. He is presented today for recommendations for further management.

DOCTOR SNOW: (After viewing the biopsy slides) There isn't a definite demarcation between normal tissue and abnormal tissue, and I think this tumor is rapidly advancing through the normal tissue.

DOCTOR CONDIT: Do you see any role for surgery for this man now?

DOCTOR SNOW: No, and there are two reasons: One, this neck mass is on the common carotid artery; and the upper mass has already produced facial paralysis by extension into the infratemporal fossa. This paralysis has occurred at the stylomastoid foramen. The internal carotid artery varies in its relationship to the stylomastoid foramen but at most it may be a centimeter medial to it. This tumor didn't cause the facial paralysis when it first reached the stylomastoid foramen, but rather after it had gone beyond it. I don't think it's possible to obtain a deep plane of dissection free of tumor starting superficial to the internal carotid artery.

DOCTOR CONDIT: Doctor Bogardus, we have a history of 4,400 rads over a period of three months and five treatments. I gather it was probably orthovoltage.

DOCTOR BOGARDUS: Do we know



where this field was located?

**PRESENTER:** It included the ear. At that time it was thought to be limited to the external canal. But, this area would have to be treated because there's tumor back in or right at the same area again.

**DOCTOR CONDIT:** What about further radiation at this time.

**DOCTOR BOGARDUS:** In the area that was previously treated it would be very hazardous, because of his previous x-ray therapy. It appears that he does have some atrophic changes which are probably secondary to x-ray. An attempt to get a curative dose into an area which has had this much radiation previously would be almost impossible. The other alternative to this is chemotherapy.

**DOCTOR CONDIT:** It's not a very good alternative; that's why I'm asking about radiation therapy first.

**DOCTOR BOGARDUS:** Conceivably we could treat every place but the areas that have been previously treated and it might be that if we undertook to treat this man we might have to stop short on these areas if we start getting any reaction. I think our chances of doing him any good are practically zero because of the type of tumor we're dealing with, the fact that we are obviously not going to treat as high as we would like to, and we're treating over a radical neck dissection.

**DOCTOR CONDIT:** Let me ask you another point about radiation therapy. This tumor is thought to have arisen in the external auditory canal. How do these compare on a scale of radiosensitivity?

**DOCTOR BOGARDUS:** These tumors as a rule are more radioresistant than a squamous carcinoma arising in the skin of another area. We have treated a number of these and some have done fairly well, but the majority of these tumors do not do very well.

**DOCTOR CONDIT:** Of course, the reason that I asked, is that it's obvious that Methotrexate has the same problem with tumors in this area, which are not terribly responsive to this drug, which can be very effective on squamous cell carcinoma arising in other

locations. So I think as far as palliation with chemotherapy is concerned, Methotrexate is the only thing that we have to offer and this is not a very good choice. Doctor Snow, aren't these cases difficult to manage under any circumstances?

**DOCTOR SNOW:** Yes. The approach advocated by Conley in the 1961 *Archives of Otolaryngology* is the best one available for external auditory canal carcinomas. Even with this carefully thought out approach, the five-year survival for early external auditory canal carcinomas is only 29 percent.

**DOCTOR CONDIT:** I would say from a realistic point of view there is really not anything that anyone can offer this man. That's really what you're trying to say, Doctor Bogardus?

**DOCTOR BOGARDUS:** That's right; because if we treat him we're probably going to cost him six weeks of time and inconvenience. We will not improve his facial paralysis, we will probably have little or no effect on the pain that he has, and we run the risk of creating additional problems by treating the previously treated areas.

**DOCTOR CONDIT:** As far as palliation with Methotrexate is concerned the chances are that we could probably give him Methotrexate without making him terribly sick, I just don't think that it's going to do a whole lot of good. This will depend upon how bad his symptoms are. If he's having a lot of pain, then I would recommend treating him. If his symptoms are not severe, I would be inclined to wait until it becomes more symptomatic. It will be up to the managing service to decide this. So whenever you think he's ready for it let us know and we'll arrange treatment with Methotrexate.

**FINAL DIAGNOSIS:** Recurrent Squamous cell carcinoma of the external auditory canal.

**TUMOR CLINIC RECOMMENDATION:** Additional surgery and radiation therapy would not be feasible. Methotrexate could be given for palliation of pain although the chances of this tumor responding to Methotrexate would not be very good. □



# Books As Clinical Tools

## CLINICAL REFERENCES IN ENDOCRINOLOGY

E. WILLIAM ALLEN, M.D.\*

Endocrinology to many physicians is an obscure branch of medicine which is concerned with a large number of esoteric and rarely seen diseases often further hidden beneath a morass of Kreb cycles, metabolic pathways and expensive laboratory tests. To a degree this impression is valid. Nonetheless, most clinical endocrinologists are sustained by the ubiquitous nature of these many endocrine syndromes. Diabetes mellitus, hyperthyroidism and hypothyroidism are well known in their influence on seemingly remote systems of the body such as the eyes, the kidneys, the skin, the bones and the cardiovascular system, but the adrenals, gonads, parathyroids and pituitary also have many manifestations of disease as well as modifying the response of the patient to non-endocrine diseases. Indeed, practitioners in all branches of medicine often have the opportunity to see the effects of the endocrine system in their patients. To recognize and cope with these occasions the non-endocrinologist should have a handy reference volume available. This review will cover the subject of general endocrinology exclusive of diabetes mellitus which has been recently reviewed.<sup>1</sup>

Books on endocrinology vary from short outlines to large volumes which are devoted

to a single endocrine system. The classical and most generally useful book is R. H. Williams' *Textbook of Endocrinology*.<sup>2</sup> The latest edition in 1968 achieved a good balance between new material and old material while keeping the size manageable. The book is thorough and moderately detailed in its coverage of physiology, pathophysiology, diagnosis and therapy. It generally has a good, but sometimes limited, bibliography. Although some chapters of this multi-authored book are much better than others, there is no other single book which can be recommended over Williams as a general endocrinology text.

Other books, however, may better suit some individuals. As an outline, Danowski's *Endocrine Gland System*<sup>3</sup> is remarkably comprehensive and yet succinct. It mentions virtually everything of importance and its absence of detail is partially compensated by a very good bibliography. I think this book would be useful as an adjunctive volume but not as the only book available. The sections on endocrinology in the major medical textbooks, Cecil-Loeb<sup>4</sup> and Harrison, *et al.*,<sup>5</sup> offer more detail at the expense of being comprehensive. Either of these two textbooks will cover the major aspects of endocrinology in a relatively short account. Cecil-Loeb seems to offer a better balance and perspective than Harrison. Duncan's *Disease of Metabolism*<sup>6</sup> and Stanbury, *et al.*, *Metabolic Basis of Inherited Disease*<sup>7</sup> both cover their slightly different but overlapping subject areas very well. However, neither is intended to be a general endocrinology

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textbook and over half of the subject material of endocrinology is omitted. Astwood and Cassidy's *Clinical Endocrinology*, Vol. II<sup>8</sup> is an updated addendum to Astwood's *Clinical Endocrinology*, Vol. I<sup>9</sup> and as a result is incomplete in itself. Using the two volumes together results in completeness and sometimes the combination is superior to Williams<sup>2</sup> but it is inconvenient. Volume II is really designed for the person who already knows the material in Volume I. Danowski's four volume *Clinical Endocrinology* is distinguished for its comprehensiveness and its extensive bibliography, although the textual material is sometimes abbreviated. It follows the same format as his outline<sup>3</sup> except that diabetes mellitus and hypoglycemia are not covered in the larger set. Its material is somewhat out of date (1962).

There are many texts on individual endocrinologic subjects. Those of particular interest to the practitioner would include Means, DeGroot and Stanbury's *The Thyroid Gland and Its Diseases* and Soffer, Dorfman and Gabrilove's *The Human Adrenal Gland*. Both are older books but still very useful clinically in their particular areas. Gold's *Gynecologic Endocrinology* is the best recent effort in a field which has been poorly represented in general. Other books of the single subject type are either more superficial than Williams or are so detailed and exhaustive as to be of little value to the non-endocrinologist.

Pediatric endocrinology is covered only moderately in Williams. Wilkins' text on pediatric endocrinology<sup>14</sup> is thorough although frequently brief in the textual material. The references are good for the literature up to about 1960. Its greatest asset is the profusion of illustrations and tables with which the book abounds. It does not cover diabetes mellitus. More recent is Gardner's text<sup>15</sup> which integrates endocrine, genetic and metabolic disorders of childhood. It is generally very well done and has an excellent bibliography.

Two other books should be mentioned. *Endocrine Physiology* by Tepperman<sup>16</sup> is an excellent brief introduction to the subject but it does not cover either diagnosis or therapy so it probably will not appeal to the practitioner. The Ciba volumes on the Endocrine System<sup>17</sup> and the Reproductive Sys-

tem<sup>18</sup> are both beautiful examples of Doctor Netter's skill and they contain many cogent points. Neither can be recommended as a text although they supplement textual material very well.

There are several endocrinology journals which are essential to an endocrinologist but do not have much appeal to the practitioner. *The Journal of Clinical Endocrinology and Metabolism* is the most general clinical endocrinologic journal and would be the most useful. However, the major general medical journals sufficiently cover the most significant endocrinologic advances in their regular issues or symposia so that it is not generally necessary to read a specialty journal in endocrinology. The subject is also moderately well covered in the Year Books and various annual reviews of medicine.

## SUMMARY

For brief, general information the section in Cecil-Loeb<sup>4</sup> or Harrison<sup>5</sup> should be useful. A copy of Williams<sup>2</sup> should be available to all physicians, if not in their personal library, for more detailed information when necessary. Finally, special interests may lead a physician to consult one or more of the other books mentioned. □

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## Physician Manpower in Oklahoma

KELLY M. WEST, M.D.\*

*This is an analysis of the supply and characteristics of physician manpower in Oklahoma. Factors studied included production, migration (to, from and within the State), specialty training, and kinds of professional activity.*

### INTRODUCTION

MANY OF THE important facts relating to the production, recruitment, and deployment of physicians in Oklahoma are well known. A detailed study is not required to determine that there is a shortage of physicians in most sections of rural Oklahoma. On the other hand there are other significant considerations that are less self-evident, such as the balance between emigration and immigration and the factors which affect it.

The information to be reported below was made possible mainly by the availability of data recently gathered by the American Medical Association. Although the AMA has been collecting data of these kinds for many years, there has been a rapid increase in very recent years in the scope and reliability of

information collected. The design of the AMA data collecting system and the use of automated processing methods have made it possible to perform many tabulations which were not previously available. Fairly accurate estimates concerning the number of physicians in the United States and in Oklahoma have been available for many years but it has been difficult to interpret such data without knowing more about the characteristics and activities of these physicians. Maryland, for example, has more physicians in relation to its population than Oklahoma, but the significance of this difference cannot be interpreted until data have been tabulated concerning factors such as the percentage of physicians who are in practice, the number of retired physicians, the number of osteopathic physicians, the number engaged in research and administration, etc.

The purpose of the studies reported below was to analyze factors of this kind in some detail better to define the significant considerations which might affect policy decisions in this field. Among the policy questions to be considered would be the priority of and means for increasing local production; the priority of and means for increasing immigration and reducing emigration; methods for achieving the most efficient and effective deployment of the limited manpower; assignment of priorities to training programs in the various specialty fields; policies relating

\*The views expressed are those of the author and not necessarily those of the institutions and organizations with which he is associated.



to graduates of osteopathic schools and foreign medical schools; social, medical, and economic factors relating to the geographic distribution of physicians, etc.

#### METHODS

Most of the data given below are either taken directly from recent AMA publications or calculated by the author from raw data furnished by the AMA and its publications. These data are of course neither completely comprehensive nor infallible. For example, the physician who has been in Oklahoma for a short period performing work which does not require a license might not yet be identified. But this system identifies and follows physicians by many different methods, and the continuing census is by no means confined to members of the American Medical Association or to licensed physicians. Based on a considerable familiarity and experience with this system I would estimate that it identifies approximately 99 percent of physicians with M.D. degrees. There is some evidence to suggest that the capacity of this system to identify unlicensed foreign graduates is a little less, but the system identifies a substantial majority even among the sub-groups containing physicians who are difficult to trace. There are two volumes which are the most comprehensive sources concerning physician manpower. They are *Distribution of Physicians, Hospitals, and Hospital Beds in the U.S., 1967*<sup>1</sup> and *Medical School Alumni, 1967*.<sup>2</sup> Both of these were sponsored and published by the American Medical Association (Department of Survey Research). The data on which these two documents are based were drawn from information as of December 31, 1967 in this continuing census. New up-dated volumes will be published in a few months. Although there have been minor changes in the characteristics of the population of physicians since December 31, 1967, the information and the analyses for the most part reflect the situation in 1969.

#### NUMBERS

There are approximately 3,200 physicians in Oklahoma. A highly precise count is not possible, but this estimate of 3,200 is based

on fairly satisfactory data. The AMA census of December 31, 1967 counted 2,776 physicians with the M.D. degree. A census in 1966 of osteopathic physicians by the Oklahoma Health Intelligence Facility under the direction of Thomas C. Points, M.D., identified 380 osteopathic physicians.<sup>3</sup> It should be kept in mind that these counts of M.D.s and D.O.s included physicians who were inactive or retired and also trainees such as interns, residents and fellows. These counts also included physicians who were in federal service and those not engaged in the care of patients (administration, research, etc.). In order to compare the characteristics of the physician population in Oklahoma with other regions, it is useful to adjust these comprehensive counts by omitting certain sub-groups such as retired physicians. In this way comparisons can be made with comparable data for other states and the United States.

The most recent AMA census (December 31, 1967) identified 2,453 physicians in Oklahoma who were active professionally and who were not in federal service.<sup>1</sup> In addition to these physicians with the M.D. degree, there are approximately 341 osteopathic physicians (active, non-federal), or a total of 2,794 physicians. In the United States there are 279,418 M.D. physicians (non-federal, active). This is a physician:population ratio of 1:706. The ratio of M.D. physicians to population in Oklahoma using these criteria is 1:990. This confirms the well known fact that Oklahoma has fewer physicians in relation to its population than the rest of the nation, but it should be kept in mind that the manpower supply is decidedly more favorable than these figures may suggest. As will be indicated below, a greater portion of Oklahoma physicians are engaged in the care of patients as compared to the rest of the nation; and in relation to its population Oklahoma has a greater number of osteopathic physicians. Finally, it will be shown that the supply of physicians in Oklahoma in relation to population is comparable to the rest of the nation if adjustments are made for certain differences in the characteristics of the two populations. For example, while Oklahoma City does not have as many physicians in relation to population as New York City, it compares very favor-



ably to cities of comparable population. Similarly, the ratio of physicians to population in smaller towns of Oklahoma is about the same as in towns of comparable size in the rest of the nation.

In relation to population the physician supply in Oklahoma is similar to that in immediately neighboring states. Oklahoma has one active non-federal M.D. for each 990 persons, while the population per physician in Kansas is 915, in Texas 927 and in Arkansas 1,147.

#### CHARACTERISTICS

*Osteopathic Physicians.* The more detailed information in this report concerns physicians with the M.D. degree. Data on osteopathic physicians in Oklahoma and the nation are more limited. An unpublished survey conducted by the Oklahoma Health Intelligence Facility in 1966 revealed that there were 368 osteopathic physicians who were active professionally.<sup>3</sup> Seventeen of these were employed by the federal government. Census figures of the Public Health Service for 1965 revealed that there were 13,027 osteopathic physicians in the United States.<sup>4</sup> Of these 13,027, 9,996 were in private practice, 310 were serving other non-federal functions, 22 were in federal service, 768 were in training and 1,931 were retired. These and other figures suggest that approximately four percent of physicians in the United States are osteopaths. From information given above and other data it would appear that about 12 percent of physicians in Oklahoma are osteopaths.

Information regarding other characteristics of osteopathic physicians in Oklahoma will be given below under the various subtitles such as Age, Specialty, Geographic Distribution, etc.

*Age and Sex.* Analyses of the year of graduation of Oklahoma physicians with the M.D. degree (including federal employees and retired physicians) showed the following frequency distribution: 5.7% graduated prior to 1920, 8.1% received degrees between 1920 and 1929, 14.8% between 1930 and 1939, 22.5% between 1940 and 1949, 25.9% between 1950 and 1959 and 22.9% between 1960 and 1967. This frequency dis-

tribution is very similar to that for all M.D. physicians in the United States. Oklahoma physicians are very slightly older but this is attributable to the fact that Oklahoma has a somewhat smaller portion of trainees in relation to its population, and it has a smaller number of foreign graduates than the remainder of the nation. A large portion of foreign graduates in the United States are recent graduates. The osteopathic physicians in Oklahoma are slightly older than the medical doctors; for example, 39.2% of M.D. physicians are less than 44 years of age, while 32.4% of osteopathic physicians are less than 44 years of age. At least part of this difference is, however, attributable to the larger portion of trainees in the group with M.D. degrees.

Calculations based on an AMA census of April 4, 1966 showed that of M.D. physicians of Oklahoma in private practice 13.9% were over 64 years of age, while 12.4% is the comparable figure for the nation as a whole. The percentage of practitioners over 64 years of age is of course a function not only of the age of physicians but also the disinclination of physicians to retire. Figures concerning the portion of physicians who have retired in Oklahoma and in the United States vary somewhat depending on the definition of retirement and the denominator used (whether it includes physicians whose addresses are unknown, those residing abroad, osteopaths, etc.), but the portion of physicians who are retired is about four percent for both Oklahoma and the United States.

I have not found figures indicating the precise number of women physicians in Oklahoma. A 1967 survey of the Oklahoma Health Intelligence Facility found that only six (1.7%) of 358 osteopathic physicians were women. Of the 2,765 living graduates of the University of Oklahoma School of Medicine, 127 (4.7%) are women.<sup>2</sup> In the United States 7.0% of physicians with M.D. degrees are women, but only 5.3% of the graduates of public medical schools in the United States are women.<sup>2</sup> The higher figure (7.0%) for the United States is attributable to the greater portion of women among graduates of foreign schools (14.2%) and of private schools (6.1%).<sup>2</sup> This higher portion of women among graduates of private



schools is not due to differences between admissions policies of public and private schools; rather it is due to the fact that one private school has until recently admitted only women (Woman's Medical College of Philadelphia).

*School of Graduation.* A recent AMA count identified 2,673 physicians in Oklahoma with M.D. degrees who were graduates of U.S. schools.<sup>2</sup> Of these 2,673, 1,338 or 50% were graduates of the University of Oklahoma. In Oklahoma there are graduates of 80 existing schools in the United States, and there are 63 graduates of extinct medical schools.<sup>2</sup> Fifty-four of these 63 physicians graduated prior to 1915. *In Oklahoma there are more than 13 times as many graduates of the University of Oklahoma than of any other school.*

The schools of other states which have furnished the largest number of physicians for Oklahoma are the University of Arkansas (97 or 3.6% of Oklahoma physicians), the University of Tennessee (94 or 3.5%), the University of Kansas (76 or 2.8%), Washington University at St. Louis (63 or 2.4%), Northwestern University (61 or 2.3%), Tulane (45 or 1.7%), University of Texas at Galveston (43 or 1.6%), Baylor University (43 or 1.6%), St. Louis University (35 or 1.3%), Vanderbilt University (31 or 1.2%), University of Texas at Dallas (33 or 1.2%), University of Iowa (30 or 1.1%), and the University of Nebraska (30 or 1.1%). Of states other than Oklahoma, Tennessee provided the largest number of graduates; 145 or 5.4% of the graduates of U.S. schools in Oklahoma are from the three Tennessee schools. The rate of "emigration" to Oklahoma has remained relatively constant for most of the schools, but there have been some interesting variations over the years. Eleven Oklahoma physicians came after graduating from the University of Iowa in the period between 1925 and 1929. Yet the number of "emigrants" from this institution has never exceeded four in any other five-year period.

Oklahoma has a much smaller portion of foreign graduates than the rest of the nation. The AMA census in December, 1967 identified only 16 graduates of Canadian schools and 77 graduates of other foreign schools in Oklahoma.<sup>2</sup>

Table 1  
MAJOR PROFESSIONAL ACTIVITY OF OKLAHOMA PHYSICIANS\* COMPARED TO U.S. PHYSICIANS

	% of Oklahoma Physicians	% of U.S. Physicians
In Practice	80.0	71.3
Interns	2.9	3.7
Residents and Fellows	8.8	12.3
Hospital Staff	3.2	6.3
Total in Patient Care	94.7	93.5
Medical School Faculty	3.8	4.2
Administration	0.6	1.0
Research	0.8	1.3

\*Based on an AMA December, 1967 census of active physicians with M.D. degrees who are not full-time federal employees. Totals are 266,520 for the U.S. and 2,365 for Oklahoma.

Only 3.4% of medical doctors in Oklahoma are graduates of schools outside of the United States. In contrast 17.1% of all medical doctors in the United States are graduates of foreign schools; 2.1% are from Canadian schools and 15% are from other foreign schools. The disparity between Oklahoma and the remainder of the United States in the portion of foreign graduates is substantially less if these data are adjusted to compare Oklahoma with those parts of the United States which have similar population characteristics. For example, there is an especially high portion of foreign graduates in the very large metropolitan centers such as New York and Chicago. The portion of foreign physicians is much lower in parts of the country with demographic characteristics similar to those of Oklahoma.

*Major Professional Activity.* Table 1 shows that there are significant differences between Oklahoma and the remainder of the nation with respect to the distribution of physicians among the major categories of activity and function. Of 2,365 active non-

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## Manpower / WEST

federal M.D. physicians in Oklahoma, 2,240 or 94.7% are engaged in patient care, while 93.5% of those in the United States have as their major function the care of patients. A substantially larger portion of Oklahoma physicians are in practice. For Oklahoma the figure is 80.0% as compared to 71.3% for the country. Only 3.2% of Oklahoma physicians have been classified as "full-time physician staff"; the comparable figure for the nation is much higher, 6.3 percent. The group of Oklahoma physicians has a portion of residents and fellows that is significantly smaller than the rest of the country. In Oklahoma 8.8% of physicians are residents or fellows, and in the United States 12.3% of physicians are residents or fellows. In the United States 3.7% of physicians are interns as compared to 2.9% in Oklahoma. Oklahoma also has a smaller percentage in academic medicine (3.8%), administration (0.6%) and research (0.8%). Comparable figures for the United States are 4.2% in academic medicine, 1.0% in administration and 1.3% in research.

These comparisons have to be interpreted with some caution because of problems of definition and classification. For example, in every academic medical center there are substantial numbers of physicians who are essentially full-time faculty members even though they are not paid primarily by the medical school. In Oklahoma this portion is probably higher than in the rest of the nation. Thus, Oklahoma has a greater number in academic medicine than would be indicated by this census method.<sup>1,2</sup> which classified as "medical school faculty" only those employed directly by the schools. Even when such corrections are applied it is evident that Oklahoma has significantly fewer physicians in training and fewer physicians serving functions which are primarily national in character. Maryland, for example, has large numbers of physicians who work in institutions serving functions which are primarily national in character such as Johns Hopkins University and the National Institutes of Health. It is interesting that of those who graduated from Oklahoma University prior to 1940 there are only five who are classified as "medical school faculty"

and there are no "medical school faculty" who graduated before 1930. On the other hand, 36 who graduated between 1950 and 1959 are classified as medical school faculty.

When analyses similar to those above also include osteopathic physicians, the results for Oklahoma are even more different from those for the United States. This is because there is a higher portion of osteopathic physicians in Oklahoma, and because of the relatively low number of osteopaths engaged in activities other than private practice.

Table 2  
FREQUENCY DISTRIBUTION OF SPECIALTIES FOR  
U.S. AND OKLAHOMA PHYSICIANS\*

	Oklahoma Number	Percent	U.S.A. Percent (258,247)
Total	2304	100%	100%
General Practice	783	34.0%	25.3%
Medical Specialties	465	20.2%	23.7%
Allergy	10	0.4%	0.4%
Cardiovascular	15	0.7%	0.8%
Dermatology	35	1.5%	1.4%
Gastroenterology	4	0.2%	0.3%
Internal Medicine	273	11.8%	14.2%
Pediatrics	118	5.1%	6.2%
Pediatric Allergy	1	0.04%	0.03%
Pediatric Cardiology	1	0.04%	0.07%
Pediatric Pulmonary	8	0.03%	0.04%
Surgical Specialties	662	28.7%	29.2%
General Surgery	214	9.3%	10.4%
Neurological Surgery	19	0.8%	0.8%
Obstetrics-Gynecology	133	5.7%	6.5%
Ophthalmology	86	3.7%	3.3%
Orthopedics	80	3.5%	2.9%
Otolaryngology	47	2.0%	2.0%
Plastic Surgery	13	0.6%	0.5%
Colon and Rectal Surgery	4	0.2%	0.2%
Thoracic Surgery	16	0.7%	0.6%
Urology	50	2.2%	1.9%
Other Specialties	394	17.1%	21.8%
Aviation Medicine	2	0.1%	0.05%
Anesthesiology	79	3.4%	3.5%
Child Psychiatry	9	0.4%	0.4%
Diagnostic Radiology	0	0.0%	0.02%
Forensic Pathology	0	0.0%	0.02%
Neurology	4	0.2%	0.8%
Occupational Medicine	14	0.7%	0.6%
Psychiatry	111	4.8%	6.9%
Pathology	49	2.1%	3.3%
Physician Med. and Rehab.	3	0.1%	0.4%
General Preventive Med.	9	0.4%	0.3%
Public Health	13	0.6%	0.5%
Radiology	85	3.7%	3.8%
Therapeutic Radiology	1	0.04%	0.04%
Unrecognized Specialties	15	0.7%	1.3%

\*Includes only active M.D. physicians not employed by the Federal Government and whose specialty status is known.

The portion of Oklahoma medical doctors who are in group practice (10.1%) is about



the same as for the United States (9.5%).

*Specialty.* The frequency distribution of specialties for M.D. physicians in Oklahoma is given in Table 2 which also shows the frequency distribution of the specialties of U.S. physicians. In relation to its population Oklahoma has a substantially higher number of general practitioners (34.0%) than the nation (25.3%). If similar comparisons are made including osteopathic physicians the disparity between the Oklahoma group and the U.S. group becomes even greater. Precise figures are not available concerning the distribution of specialties of osteopathic physicians, but a survey by the Oklahoma Health Intelligence Facility in 1966 suggested that approximately 2/3 of Oklahoma osteopaths are in general practice. As indicated above approximately 12% of Oklahoma physicians are osteopaths, while only 4% of U.S. physicians are osteopaths. The propensity of recent M.D. graduates to avoid general practice is nationwide, but it is not so marked in Oklahoma as elsewhere. Even those physicians working in Oklahoma who graduated between 1950 and 1959 chose general practice frequently (29.1%).

Table 2 shows that in many specialties there is no significant difference between Oklahoma and the United States. The percentages in surgical specialties and in each of the individual surgical specialties are approximately the same for Oklahoma and the nation. Oklahoma does have significantly more orthopedic surgeons in relation to population (3.5%) than the United States (2.9%).

In relation to other states Oklahoma has fewer physicians in the "medical specialties." There are significantly smaller numbers of internists (11.8%) and pediatricians (5.1%) in Oklahoma as compared to the country as a whole; in the United States 14.2% of physicians are internists and 6.2% are pediatricians. There are four other specialties in which the numbers in Oklahoma are substantially less in relation to population than the national average. The data in Table 2 show that there are fewer physicians in pathology and psychiatry in Oklahoma than in the other states. Particularly striking is the fact that the portions of physicians in Oklahoma who are specialists in neurology and in physical medicine are only

about one-fourth of the national average.

As will be pointed out below, the national averages cited in Table 2 should not necessarily be considered ideal standards either for Oklahoma or the United States. Most observers would agree, for example, that in relation to national need the supply of general surgeons exceeds the supply of neurologists or pathologists. The discussion below will also indicate certain differences in the characteristics of the populations of the United States and Oklahoma. The particular population characteristics in Oklahoma require, therefore, a somewhat different frequency distribution of specialties to achieve an ideal balance. Nevertheless, comparisons with the national averages provide information which is quite useful even though they must be interpreted with the special local needs in mind.

Figures are not available for the number of board-certified physicians in Oklahoma, but AMA data show the number of certified physicians who are graduates of the University of Oklahoma.<sup>2</sup> About half of these physicians are living in Oklahoma. Among 2,675 Oklahoma graduates 773 are certified; the percent certified is similar for Oklahoma graduates (28.9%) and for all schools (31.3%). The portion with certification is low for foreign graduates in the United States (14.1%), but a large number of these are trainees. Of the graduates of domestic schools, 34.4% are certified. Certain schools have a much higher portion of certified graduates; 57.5% of Harvard graduates are board-certified. In view of the fact that more Oklahoma University graduates are in general practice and fewer are in large cities, the rate of board-certification compares favorably with other schools.

#### GEOGRAPHIC DIFFERENCES IN THE SUPPLY, FUNCTIONS AND CHARACTERISTICS OF PHYSICIANS

It is well known that there are substantial differences among the various regions of Oklahoma with respect to the supply of physicians. In 1967 the Oklahoma Health Intelligence Facility measured these differences. It was found that the number of medical doctors per 100,000 population varied from a high of 145 in the Oklahoma City area to



a low of 41 in the McAlester area. Even in Tulsa there were only 85 physicians per 100,000. The Bartlesville area had 75 physicians per 100,000 population, the Enid area had 75, the Clinton area 69, the Muskogee area 67, the Ardmore area 60, the Ada area 58, and the Lawton area 47. In interpreting these data several considerations should be kept in mind including the larger portion of physicians in the metropolitan areas, particularly Oklahoma City, who are trainees, teachers, administrators, etc.; the availability of services in immediately adjacent areas such as Wichita Falls, Texas; and the available supply of other medical manpower such as osteopathic physicians. In the 11 counties of Oklahoma with the lowest income levels there is only one medical doctor for each 2,752 persons, but this shortage of manpower is to some extent relieved by the presence of 28 osteopathic physicians who constitute 30.8% of the physician manpower in these counties. It is also relevant that whereas only 62.5% of active non-federal M.D.s in Oklahoma County are in practice, 86.9% of those outside of Tulsa and Oklahoma Counties are in practice. In Tulsa county 82.7% are in practice.

Table 3  
RELATIONSHIP OF POPULATION DENSITY TO  
PHYSICIAN\* MANPOWER IN OKLAHOMA  
AND THE UNITED STATES

	Population: Oklahoma	Physician Ratio U.S.A.
Counties with 500,000 to 1,000,000 inhabitants	522:1	649:1
Counties with 50-100,000 inhabi- tants which are in metro- politan areas	936:1	795:1
Counties with over 50,000 inhabi- tants which are not in metro- politan areas	1009:1	960:1
Counties with 25-50,000 inhabitants	1351:1	1535:1
Counties with 10-25,000 inhabitants	1715:1	1731:1
Counties with less than 10,000 inhabitants	2086:1	2360:1

\*Calculations include all non-federal M.D. physicians (active and inactive).

There are other differences in the characteristics of the populations of physicians in the large urban centers and those who reside outside these urban areas. Of the physicians in Tulsa and Oklahoma counties 21.5% are

in general practice, whereas 60.8% are in general practice in the areas outside of the two large population centers.

The portion of medical doctors in Oklahoma county who are in practice (62.5%) may seem small, but comparisons with data from cities with similar characteristics show the same situation. For instance, only 65.1% of physicians who live in "metropolitan areas" (generally, these are cities with populations of over 50,000) are in practice. In general, this figure is even lower in cities with one or more academic medical centers where there are many physician trainees, teachers, scientists, and administrators. Of all the medical doctors in the United States only 16.5% work outside of metropolitan areas, while 29.3% of Oklahoma physicians work in non-metropolitan areas.

The figures in Table 3 show the physician: population ratios in Oklahoma for various levels of population density and compare these with the average physician: population ratio for the nation in counties with comparable population densities. It may be seen that in the more sparsely populated areas of Oklahoma the physician: population ratio is slightly more favorable than for the United States. These small differences become more significant if similar analyses are made including osteopathic physicians as well as medical doctors. Thus, the degree of these shortages of physician manpower in the less densely populated areas of Oklahoma is not as great as in comparable regions in other states. In most nations this urban-rural maldistribution of physician manpower is much more severe than in the United States.

*Relationship of the Supply of Physicians to Levels of Economic Development.* Although it is quite evident that there is a general association between density of population and the physician:population ratio, it is difficult to determine the extent to which various factors are responsible for this association. For this reason the physician: population ratio has been measured in groups of Oklahoma counties which are some distance from major metropolitan centers and which have less than 30,000 inhabitants. These counties were then divided into a group of "rich" counties where average incomes per capita exceed \$2,300 per year and



"poor" counties where annual per capita income averages less than \$1,500. Although population densities are comparable in the two groups, physician: population ratios are markedly less favorable in the "poor" areas. In these poor counties there is only one medical doctor for each 2,752 people. In the "rich" areas the physician: population ratio is 1:1,152.

In these poor counties the shortage of physicians is being partially relieved by osteopathic physicians. In the poor counties 30.8% of all physicians are osteopaths, while in the rich counties, also sparsely populated, only 7.4% of the physicians are osteopaths. Even when osteopathic physicians are included in the calculations, the physician: population ratio is more than twice as high in the rich counties. It should be pointed out that while these two different groups of counties are matched for population density they differ not only in economic status but also in other ways. One cannot be certain that the differences in the supply of physicians is mainly due to income levels in these regions. Although it is probable that the demand for medical services is less in the poor areas, there is no evidence available that the income of physicians is lower in these counties. So far as I know the levels of income for physicians in the various regions of Oklahoma have not been measured. Most observers would agree, however, that lack of economic opportunity is not a major factor in explaining the reluctance of physicians to live in these areas.

#### THE BALANCE BETWEEN GAINS AND LOSSES

*Losses.* The three factors which determine losses are rates of emigration, retirement, and death. None of these three rates have been determined precisely for Oklahoma, but it is evident that in recent years additions to the profession have exceeded losses by a considerable margin. This conclusion is based on the observations below and some additional data.

Only 5.7% of the medical doctors in Oklahoma graduated prior to 1920, and only 8.1% graduated between 1920 and 1929.<sup>2</sup> In contrast, 25.7% of Oklahoma physicians graduated between 1950 and 1959 and 22.9%

graduated between 1960 and 1967.<sup>2</sup> As pointed out above, the portion of practicing physicians in Oklahoma who are over 64 years of age and the portion who are retired are similar to these percentages for the country as a whole. During the past three years an annual average of 28 of the members of the Oklahoma State Medical Association have died. More than 90% of Oklahoma medical doctors over 40 years of age are members, so the death rate among OSMA members is only slightly below the death rate for all M.D. physicians in the state. These and other calculations suggest that losses of M.D.s from retirements and deaths combined are now roughly 55 per year. In comparison, production rates are very favorable; there were 98 O.U. graduates in 1969.

Emigration losses will be discussed below under Immigration and Emigration.

*Production.* In 1969 there were 98 graduates from the University of Oklahoma School of Medicine. This represents approximately 1.2% of the national output of medical doctors which is almost exactly equal to the percentage of the national population in Oklahoma (1.25%). Local output can be expected to rise sharply soon because the class of 1970 will have at least 125 students. In the past 40 years the production of physicians by the University of Oklahoma School of Medicine has risen at a much greater rate than the population of Oklahoma. There has been only a slight rise in population since 1930 but output increased from 190 in the five year period of 1925-29 to 460 for the period 1955-59. Prior to 1950 Oklahoma produced a much smaller number of physicians in relation to its population than the remainder of the country.

*Immigration and Emigration.* Exactly half (50.0%) of medical doctors in Oklahoma are graduates of the University of Oklahoma School of Medicine. The portion of "imported" physicians is slightly greater among those who graduated prior to 1920 (58.7%). The University of Oklahoma School of Medicine was founded in 1910, and production rates were quite small during the early years of the school. On the other hand, since 1920, in each decade the portion of Oklahoma graduates who have stayed in the state has remained at or slightly above 50%. For example, of the physicians who graduat-



ed between 1940 and 1949, 50.7% are University of Oklahoma graduates; the comparable figure for those who graduated between 1950 and 1959 is 50.9%. Of all U.S. physicians who are graduates of domestic schools 42.8% reside in the same state of their school of graduation. The graduates of private schools have stayed less frequently in the state where they received their medical education (37.0%). The propensity of Oklahoma graduates to immigrate (50.0%) is almost exactly the same as the national average for graduates of public medical schools (50.2%).

The rate of emigration is no doubt enhanced by the relatively low number of internships and residencies in this state. For example, in 1967 there were 91 University of Oklahoma graduates serving internships in Oklahoma and elsewhere, but there were only 68 interns in Oklahoma from all schools. There were 199 residents and fellows in Oklahoma in 1967, but there were 254 University of Oklahoma graduates serving in residencies. Obviously the number of Oklahomans who go to other states for internships and residencies exceeds the number of non-Oklahomans who come to Oklahoma. However, during recent years substantial progress has been made in increasing the number of residency opportunities in Oklahoma. The potential effects of this factor on the supply of manpower have been shown above. For many years Oklahoma has had a strong and prolific residency program in orthopedic surgery, and Oklahoma has a number of orthopedic surgeons which in relation to its population is substantially higher than the national average. On the other hand, severe shortages in the field of neurology and physical medicine are at least partially attributable to the very limited local training opportunities in these fields. A training program has been established recently in neurology at the University of Oklahoma Medical Center which can be expected to ameliorate the shortage of neurologists.

Examination of the frequency distribution of specialties for all University of Oklahoma graduates is of interest because half of these individuals are working in other states. Thus, these data reflect to some extent the

professional activities of those graduates of the University of Oklahoma who migrated.

Table 4  
IMPORT-EXPORT BALANCE OF OKLAHOMA  
FOR SELECTED SPECIALTIES\*

Specialty	Graduates of all schools, working in Oklahoma	Graduates of O.U. Working in Okla. and other states	Balance
General Practice	783	818	-35
Internal Medicine	273	256	+17
Pediatrics	118	93	+21
General Surgery	214	261	-47
Neurologic Surgery	19	32	-13
Obstetrics-Gynecology	133	147	-14
Ophthalmology	86	105	-19
Urology	50	41	+9
Neurology	4	14	-10
Psychiatry	111	141	-30
Pathology	49	75	-26
Medical School Faculty	91	66	+25

\*These figures do not necessarily reflect current trends; they are the result of emigration and immigration since 1910 when the University of Oklahoma Medical School was founded.

Of all Oklahoma graduates 5.6% are psychiatrists, while only 4.8% of physicians in Oklahoma (graduates of all schools) are psychiatrists. Thus, Oklahoma has exported more psychiatrists and physicians who became psychiatrists than it has imported. During the past few years local production rates have risen considerably in this field, so the deficits are probably related to the low rates of production which were obtained previously. The results of similar analyses for other specialties are shown in Table 4. These figures show, for example, that Oklahoma has imported more pediatricians and potential pediatricians and more internists and potential internists than it has exported. It has also imported more urologists and potential urologists than it has exported. It has exported more pathologists and potential pathologists than it has imported. In 1967 there were only four neurologists in Oklahoma but there were 14 neurologists in the United States who were graduates of the University of Oklahoma!

An analysis of the AMA census figures for December 31, 1967 showed that since 1915 the rate of emigration has exactly balanced the rate of immigration. There were 2,663 graduates of the University of Oklahoma in the United States who had graduated since 1915, and there were 2,663 physicians in the state of Oklahoma of whom half are graduates of schools outside of Okla-



homa. When trainees are excluded from these calculations the number of physicians who have come to Oklahoma slightly exceeds the number who have left. The entry-exit balance is further improved by the immigration of osteopathic physicians. Oklahoma has no osteopathic schools, but there are about 380 osteopathic physicians in Oklahoma.

One very important source of manpower for the United States in recent years has been the immigration of foreign-trained physicians. Approximately one-fourth of these graduates of foreign schools are American citizens. In recent years approximately 15 to 20% of new additions to the profession in the U.S. have been foreign trained physicians. The number of foreign graduates who have immigrated to Oklahoma is far below the national average. In Oklahoma there are only 16 medical doctors who are graduates of Canadian schools (0.6% of Oklahoma medical doctors), and there are only 77 graduates of other foreign medical schools (2.8% of Oklahoma physicians). In the United States the concentration of Canadian physicians (2.1%) and other foreign graduates (15%) is several times as great as the concentration in Oklahoma. It is interesting that when all physicians including osteopaths, graduates of domestic medical schools, and of foreign medical schools are considered as a total manpower pool, the portion of the total group who are graduates of domestic medical schools is about the same for Oklahoma and the United States. In Oklahoma the supply of domestically trained medical doctors is supplemented by a small number of foreign medical doctors (2.4% of the total) and a large number of osteopathic physicians (about 12% of all physicians), while in the United States the pool of domestic graduates is supplemented by a large number of foreign physicians (17.1% of the total M.D. graduates) and a small number of osteopaths (about 4% of all physicians). Because a large share of the foreign physicians are interns and residents, the portion of foreign-educated physicians is substantially smaller in the group of practicing physicians. Nevertheless, the portion of practicing physicians who are foreign is considerably higher for the United States than for Oklahoma.

Data on licensure collected by the Oklahoma State Board of Medical Examiners and by the American Medical Association<sup>5</sup> do not make it possible to calculate yearly figures on emigration and immigration. For example, an Oklahoman licensed in another state may be a trainee who will later return to Oklahoma. These licensure data do, however, provide some indirect evidence concerning the rates of entry and exit. The Oklahoma State Board of Medical Examiners issued 202 licenses in 1968. This represented 0.9% of a total of 21,816 licenses issued in all states. Thus, in relation to its population (1.3% of the U.S. population) Oklahoma issued a number of licenses which was a little less than the average of other states. In making these comparisons between Oklahoma and other states it should be kept in mind that these figures do not include osteopathic physicians. In 1968, 24 licenses were issued to osteopathic physicians in Oklahoma; this represented 2.2% of 1,102 licenses issued in the United States. These licenses granted to medical doctors and osteopaths were, of course, issued for a variety of reasons; these numbers are therefore an imprecise reflection of the rate at which new additions are made to the profession. In 1968, 86 licenses were granted in Oklahoma to medical doctors who represented new additions to the profession (in the United States); this was 0.9% of 9,766 licenses issued in all states. Only two of the 86 licenses in Oklahoma (2.3%) were issued to graduates of foreign schools, while 22% of all the additions to the profession in the United States were foreign graduates.

Licenses may be issued either by examination or by reciprocity and endorsement. In 1968 the State Board of Medical Examiners issued 98 licenses on the basis of successful completion of an examination; 73 of the 98 were graduates of the University of Oklahoma, 24 were graduates of foreign schools, and none were graduates of other domestic schools. During the same year (1968) 80 graduates of the University of Oklahoma were licensed by examination, 73 by the Oklahoma Board and seven by boards of other states.

In 1968 the Oklahoma Board licensed 101 persons by endorsement of credentials. This would include, for example, a person who



Table 5

BALANCE OF EMIGRATION-IMMIGRATION  
BETWEEN OKLAHOMA AND SELECTED STATES

State	Our graduates in their state	Their graduates in our state	Balance
California	214	12	-202
Colorado	70	15	-55
Texas	270	119	-151
Kansas	77	76	-1
Nebraska	8	41	+33
Missouri	30	106	+76
Arkansas	32	97	+65
Illinois	32	111	+79
Tennessee	10	145	+135
Pennsylvania	17	56	+39
New York	34	62	+28

Based on data of AMA<sup>2</sup>

was licensed previously in Kansas and admitted by reciprocity without an additional examination by the Oklahoma Board. Of the 101 licenses issued by endorsement, four were graduates of the University of Oklahoma, 92 were graduates of other domestic schools and five were graduates of foreign schools. In the same year 119 licenses were issued in other states to University of Oklahoma graduates through endorsement of credentials. In 1968 the Oklahoma board issued 84 licenses to persons who represented new additions to the profession; 76 of these were graduates of the University of Oklahoma, six were graduates of other domestic schools and one was a foreign graduate. In the same year 87 University of Oklahoma graduates who represented additions to the medical profession were licensed in all states, 76 of these were licensed in Oklahoma and 11 in other states.

These and other data on licensure suggest that in the last two years the entry-exit balance of Oklahoma has been slightly negative with respect to graduates of domestic medical schools. The number of O.U. graduates who are leaving is about the same or slightly greater than the number of graduates of domestic schools who are arriving. The balance is quantitatively improved by net gain of osteopathic physicians and foreign trained medical doctors, but the rate of immigration of foreign physicians to Oklahoma is less than the average of other states.

Table 5 shows the balance of entry-exit between Oklahoma and selected states. It

may be seen that the University of Oklahoma School of Medicine has provided large numbers of physicians for Texas, California, and Colorado. On the other hand, Oklahoma has received large numbers of physicians from schools in Tennessee, Missouri, Arkansas, Nebraska, Illinois, and other states. It is interesting that the migration from the University of Oklahoma to Kansas has almost exactly equalled the migration of Kansas graduates to Oklahoma. It may be noted that the vector of the migration is primarily from Northeast to Southwest. There are, however, exceptions to this generalization. For instance, there are 30 graduates of the University of Oklahoma in Florida. There is also an association between gains of physicians through immigration and the rates of increase of the general population. For example, the populations of Texas and California have grown very rapidly in the last generation, while the populations of Arkansas and Kansas have remained more stable. The loss of substantial numbers of physicians to California is, of course, not at all unique to Oklahoma. Most other states have shared in this contribution of physicians, farm laborers and assorted other types to the promised land. There are, in California 476 physicians from Nebraska schools, 394 from the University of Kansas and 636 from Texas schools!

In interpreting the "gains" by Oklahoma as shown in Table 5, it should be remembered that some of these graduates from schools in other states are native Oklahomans who returned after attending medical school elsewhere. As indicated above, until very recently a substantial portion of Oklahomans who attended medical school enrolled in schools outside the state. In more recent years this negative balance of exchange has decreased as the number of positions and the quality of medical education has improved in Oklahoma. In 1968 the balance was still slightly negative; there were 16 out of state students in the University of Oklahoma entering class, while there were 25 Oklahomans enrolled in the entering classes of medical schools outside of Oklahoma.<sup>6</sup> Sixteen of these Oklahomans who entered other U.S. medical schools in 1968 were enrolled in private schools and nine were entered in public medical schools.



## DISCUSSION

The data in this presentation, although extensive, provide only a skeleton of information concerning physician manpower in Oklahoma. Moreover, the situation was considered almost entirely in quantitative terms, ignoring for the most part certain important qualitative considerations. The effectiveness of physician manpower is determined to a considerable degree by these qualitative factors such as the dedication and ability of the physicians, and the quality, efficiency, and relevance of the services they render. Other quantitative factors not measured here are also important such as the number of hours physicians work, the number of tasks which they can effectively delegate to non-physicians, the relative costs of producing and recruiting physicians, etc.

A discussion of the implications of these findings is beyond the scope of this presentation. Certain immediate implications of the data have been mentioned above, but a more complete analysis of these considerations must await another occasion. A few questions can be posed which will provide some insight into the issues suggested by these and related data. How should we determine policies and priorities? What can we do to bring about a more favorable balance between immigration and emigration without appreciably lowering standards of medical practice? What additional measures should be undertaken to attract family physicians and other specialists to areas where physician manpower is in short supply? What measures can be taken to increase the efficiency of the limited physician manpower? Finally, who should determine priorities and policies?

Oklahoma has some challenging physician manpower problems but no integrated system for evaluating these difficulties and developing policies and priorities. The University of Oklahoma has a clear delegation of responsibility for producing physicians, but there is no rational or systematic method for comparing the priority of expenditures in production with investments in other areas such as expanding the scope and magnitude of internship and residency training

programs, recruiting of physicians from outside the state, improving the efficiency and effectiveness of the deployment of the limited manpower, etc. No doubt there are some advantages to the present unplanned and unsystematic approach, but the nature and extent of the problem and the very great cost of high quality education and medical care suggest a need for a more rational and systematic determination of priorities and policies. For example, one could ask how we can justify spending about \$100,000 for the 12 year training program (college through residency) of a single physician, while giving so little attention to other factors which determine the supply of physician manpower. We freely admit osteopathic physicians while discriminating against graduates of some good foreign medical schools under certain circumstances. A much needed, highly-qualified neurologist who wanted to come to Oklahoma would be denied a license to practice if he were not yet a citizen of the United States. He would probably go to another state where the law permits licensure of qualified physicians who are eligible for citizenship and are in the five-year process of obtaining it.

The concept of a *voluntary* consortium or commission on physician manpower has certain advantages to recommend it. A collaborative enterprise of this kind might include such parties as the Oklahoma State Medical Association, the State Regents, the Oklahoma Hospital Association, the Board of Medical Examiners, the University of Oklahoma, the State Legislature, the Executive Branch of State Government, and other groups including representatives of the public. Perhaps this cooperative undertaking could be a project of the Comprehensive Health Planning Program of Oklahoma. □

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University of North Carolina School of Medicine

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Martin H. Keeler, M.D., Professor of Psychiatry  
Morris Lipton, M.D., Professor of Psychiatry  
Francis Kane, M.D., Asso. Professor of Psychiatry  
John A. Ewing, M.D., Professor and Chairman, Dept. of Psychiatry  
University of North Carolina School of Medicine

**Dec. 30 PHYSICAL SIGNS IN CORONARY DISEASE (60 Min.)**

Ernest Craige, M.D., Professor of Medicine  
Orlando F. Gabrielle, M.D., Asso. Professor of Radiology  
Nelson Watts, Fourth-Year Medical Student  
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## "Rubella Sunday" Rescheduled For February 1st

To gain more time for preparation the OSMA Immunization Committee has rescheduled Rubella Sunday for February 1st, 1970. On that date the committee hopes to immunize a minimum of 200,000 children against rubella. It is hoped that the immunization will run closer to 300,000.

Called "Rubella Sunday" the purpose of this special day is to eliminate rubella in the state of Oklahoma. On this day hundreds of thousands of children between the ages of one and 11 will be offered the rubella vaccine. At this time the vaccine is not recommended after puberty because of the danger of pregnancy at the time the vaccine is given or that pregnancy will occur within two or three months after the vaccine is administered.

If a large enough segment of the child population of the state receive the vaccine, the anticipated epidemic in the spring of 1970 will be prevented and the disease can be ranked with measles and polio as being no longer a problem.

Armond Start, M.D., Oklahoma City pediatrician, is chairing the immunization committee and coordinating the entire project. Rubella Sunday is a project that can be carried out only by an entire medical health team. Therefore it is being jointly sponsored by the OSMA, Oklahoma State Department of Health, Oklahoma Society for Crippled Children and the Oklahoma State Junior Chamber of Commerce.

The Jaycee's have pledged to underwrite the cost of vaccine for those youngsters unable to pay. To all others the cost will be about \$2.00 per dose. Anyone wishing to contribute to underwriting the cost of the campaign should send contributions to the Oklahoma Society for Crippled Children, P.O. Box 40, Oklahoma City, Oklahoma.

Rubella Sunday will operate much like the Polio Sundays that were car-

ried out in 1963. There will be designated areas in each county where immunization clinics will be set up. The clinics will be manned by physicians and nurses donating their time. The charge for vaccine will be enough to cover the cost of the vaccine only and all other services will be donated. □

## Rural Medical Care To Be Studied

A blue ribbon panel to study the delivery of rural medical care in Oklahoma has been named by Hilar E. Denver, M.D., OSMA President. Creation of the panel was recommended by the OSMA's Committee on Planning and the Council on Public Health and was authorized by the Board of Trustees.

Primary responsibility of the council will be to analyze the health manpower situation and the medical deficiencies in rural Oklahoma and to determine the medical need and make recommendations to fill such needs. The panel's recommendation will be aimed at various agencies, associations and governmental bodies that can best help solve the problems of manpower needs in rural Oklahoma.

Representatives from various groups have been invited to serve on the panel. Members will include physicians in private practice, educators, senators, and members of the House of Representatives, representatives from governmental agencies and health planning groups, and other organizations interested in medical care.

Preliminary plans call for a meeting of the full panel in early January.

William McCurdy, M.D., Purcell, has accepted Doctor Denyer's invitation to serve as chairman of the panel. James L. Dennis, M.D., Dean and Vice-President of the O. U. Medical Center, has accepted the

vice-chairmanship.

First area of study for the panel will be the availability of physician services to rural communities. A preliminary information study is being conducted by the health intelligence facility of the medical center for presentation to the council.

Members of the council include the following: The Honorable Ernest Martin, Oklahoma State Senate, Chairman of the Senate Public Health Committee; The Honorable Wiley Sparkman, Oklahoma House of Representatives, Chairman of the House Public Health Committee; Ken Hager, Executive Director, Oklahoma Health Careers Council; Tom Points, M.D., Associate Professor of Public Health, O. U. Medical Center.

Jack Boyd, Director of the Oklahoma Health Planning Agency; Dale Groom, M.D., Director of the Oklahoma Regional Medical Program; Phil Smith, Sc. D., Chairman of the Board of Admissions, O. U. Medical Center; Cleve Rodgers, Executive Director, Oklahoma State Hospital Association.

Ed Young, M.D., Secretary-Treasurer, Oklahoma Board of Medical Examiners; Roger Lienke, M.D., Dean of the School of Family Medicine, O. U. Medical Center; A. B. Colyar, M.D., Commissioner, State Department of Public Health; Walt Whitlow, Associate, American College of Surgeons Committee on Trauma, Oklahoma.

Joe Duer, M.D., private practice, Woodward; Bob Hogue, M.D., private practice, Guthrie; Ken McFall, Executive Director, Oklahoma Farm Bureau; Thomas Rhea, M.D., private practice, Idabel.

Jack Fetzer, M.D., President of the Oklahoma Chapter of the American Academy of General Practice; Ben Blackstock, Executive Director, Oklahoma Press Association; and Charles Tefertiller, M.D., private practice, Altus. □



## New Regional Library Services Now Available

To improve information services to all health professionals in the state is the purpose of the new Regional Library Service Project of the Oklahoma Regional Medical Program.

Surveys of hospital library resources in Oklahoma made in 1966 by Mr. Leonard Eddy, Librarian of the University of Oklahoma Medical Center, and in 1967 by Mrs. Patricia Smith, Coordinator of Library and Information Services, Oklahoma Regional Medical Program, indicated that most of these libraries are small, understaffed collections. The Regional Library and Information Services Project will assist the local hospital in improving the services available in its library, and at the same time offer backup services using the resources of the 78,000 volume library of the University of Oklahoma Medical Center.

Strengthening of local libraries will be accomplished, first, through a series of training workshops for hospital library personnel. The first such workshop was held on May 5th in the University of Oklahoma Medical Center. Twenty-two hospital librarians attended this first workshop, and, since the May 5th session, librarians from other hospitals in the state have indicated their interest in attending future sessions. Every person responsible for the library in his local hospital is invited and encouraged to attend these training sessions.

Consultation services will be available from Mrs. Patricia Smith for those wishing to improve their local hospital library. Special assistance is available in book selections for the small hospital library.

Back-up services from the University of Oklahoma Medical Center Library are available to any health professional in Oklahoma. He may call or write the Regional Library Services Unit in the University of Oklahoma Medical Center Library directly, or he may submit his re-

quests through his local hospital librarian. His request may be for a specific article in a particular journal, or it may be for several articles on a particular subject. Most frequently, photocopies of relevant articles will be mailed to the health professional, but when appropriate, the book or journal will be loaned from the Medical Center Library. The first 30 copies supplied in response to a request will be given free of charge; if a request exceeds 30 copies, the health professional will be charged for these additional copies, at ten cents per page. A professional librarian will perform this reference service.

Rapid service, ideally within 24 hours after receipt of request, is a goal of the Regional Library Services Unit. Night and week-end calls for information will be received by a 'Code-a-Phone' and these requests filled at the beginning of the next working day.

The Regional Library Services Unit is designed to improve the flow of relevant, recent information to health professionals throughout the state, to assist them in making difficult patient-related decisions and in increasing the effectiveness of their own continuing education endeavors.

Any health professional interested in receiving this reference service is invited to call or write: Mrs. Patricia Smith, Coordinator of Library and Information Services, University of Oklahoma Medical Center Library, 801 N.E. 13th Street, Oklahoma City, Oklahoma 73104. Phone: (405) 232-5656. □

## Myrtle Laughlin Lectureship in January

The Myrtle Laughlin Memorial Lectureship in Hematology will be held in the University of Oklahoma Medical School auditorium at 12:00 noon on January 15th, 1970.

Sol Sherry, M.D., Professor and Chairman of the Department of Medicine, Temple University, Philadelphia, will speak on "Physiological, Pathological and Therapeutic Aspects of Fibrinolysis." □

## Summer Employment For Medical Students

More than 120 medical students at the University of Oklahoma School of Medicine need summer employment during June, July and August of 1970. Their SAMA Chapter has approached the OSMA for assistance in finding such employment through the OSMA Medical School Liaison Committee.

The committee is now contacting all physician-members of the OSMA and soliciting employment for the students. The students have indicated that they are willing to work in almost every Oklahoma community and that they would prefer this type of employment to government work, which is the other alternative if the OSMA cannot offer assistance.

In a letter to all OSMA physician-members, C. Riley Strong, M.D., Chairman of the Medical School Liaison Committee said, "The students would like to have about \$350 monthly salary during the June-August term of employment . . . (they) would be most useful in your office, doing laboratory work and histories or perhaps administrative work involving insurance and government claim forms, etc. They would also be valuable employees in various capacities in hospitals or nursing homes."

Since the students will come from the freshman, sophomore, and junior classes, it is recommended that the type of work they are assigned be predicated on their medical education.

Physicians interested in employing medical students during the summer should contact the OSMA Medical School Liaison Committee with pertinent information about the job.

As soon as employment opportunities are collected, a screening committee of medical students and physicians will try to match the students with the job available. An interview between the student and the prospective physician-employer will then be arranged. Final negotiations for the actual employment will be left to the student and the physician. □





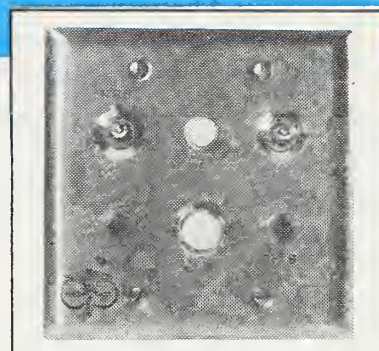
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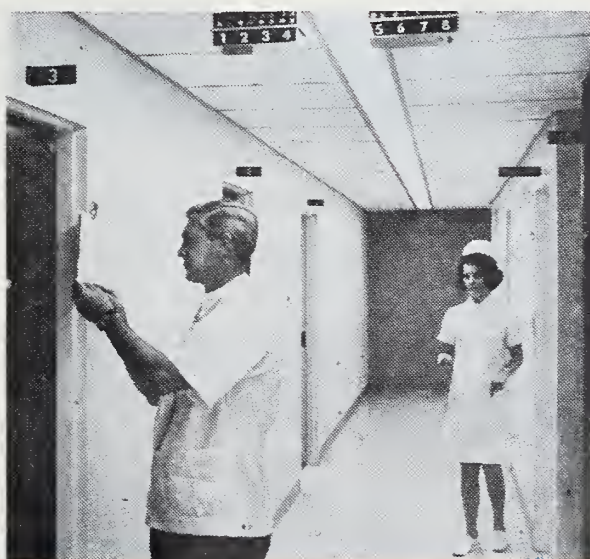
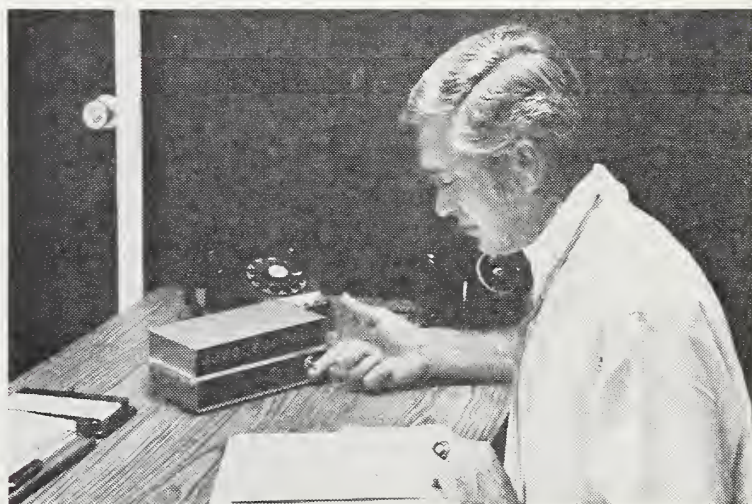


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## Self-Employed Physicians Insured For Disability Under Social Security

Many self-employed physicians reached an important social security landmark this October. With their earnings covered since 1965, they have now contributed to social security long enough to be insured for disability.

Social security disability benefits can be paid to an insured person under 65 who has a physical or mental impairment so severe as to keep him from doing any substantial work for a year or longer. Payments begin after a waiting period of six full calendar months.

Benefits can be as much as \$218 a month for a disabled person alone and up to \$434.40 a month for a family. Self-employed physicians disabled in the immediate future, however, would probably not yet be eligible for these maximums since their earnings have been covered by social security for a relatively short time. Benefits are figured from a person's average covered earnings over a period of years.

"This disability protection can be a valuable supplement to the physician's private insurance," said Bernard Popick, director of social security's disability program. "It is part of the total social security package of protection—disability, retirement, survivors and health insurance—toward which the physician has been contributing." □

## Medical Care Available To State Legislature

Members of the Oklahoma Legislature don't have far to go for medical care during the legislative session. The Doctor of the Day program will again be sponsored by the OSMA and the Oklahoma Chapter of the American Academy of General Practice.

This will mark the fifth year the program has been undertaken. It provides a licensed medical doctor and a registered nurse to be on call

at the State Capitol Building during the time the House of Representatives and the State Senate are in session. The doctor is provided a fully equipped first-aid station located between the chambers of the two legislative bodies on the fourth floor of the capitol building.

Both the Senate and the House meet Monday through Thursday of each week during the legislative session. Approximately 70 to 75 volunteer physicians will be needed to maintain the first-aid station and doctor of the day program during the second session of the 32nd state legislature.

C. Riley Strong, M.D., Chairman of the OSMA Board of Trustees has been coordinator of the project for several years and has requested that

all interested physicians contact Ed Kelsay, Associate Executive Director of the OSMA, to volunteer for the project.

Doctor Strong said, "The Doctor of the Day program is a valuable adjunct to our association's public relations and legislative liaison activities."

The first-aid station is being equipped through voluntary contributions of drugs and supplies from the various companies servicing doctors' offices. Supplies are being furnished by the Melton and Company, Oklahoma Physician's Supply, and Connie's Prescription Shops.

Drugs to be dispensed by the doctor of the day have been donated by various pharmaceutical companies through the local detail men. □



## Alumni Association Key Workers Feted

That's a money tree Ed Calhoon, M.D., Beaver, outgoing president of the Alumni Association of the University of Oklahoma School of Medicine, is showing new president Adolph N. Vammen, M.D., center, Tulsa, and vice-president Elmer Ridgeway, M.D., left, Oklahoma City. The "trees" were centerpieces at the annual medical alumni banquet which feted key workers in the 1968 HERO bond campaign. The bond issue will yield \$26,800,000 for the OU Medical Center. Other officers elected at the October 26 meeting in Oklahoma City are Robert E. Engles, M.D., Durant, secretary, and John Moore, M.D., Pauls Valley, treasurer. □



## Medicine and Religion Conference Topic

Consultation between physician and pastor to aid the patient, and drug abuse will be subjects for a half day conference between physicians and clergymen. Scheduled for Thursday afternoon and evening, January 15th, the conference will be held at the Center for Christian Renewal, Northwest of Oklahoma City.

Purpose of the conference will be to familiarize county medical society chairmen and the clergy representatives from each area with the problems in practices of cooperation between physicians and clergymen for the benefit of the patient. It is hoped that the participants will go back to their home counties and conduct county-wide joint programs.

Planned by the OSMA Medicine and Religion Committee, Ed Fair, M.D., Chairman, participation in the program will be by invitation. The chairmen of the county society's medicine and religion committee along with a clergyman of his choice

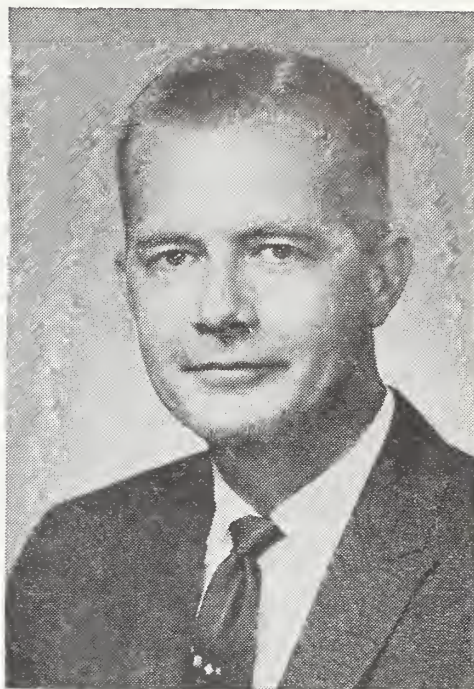
will be invited to the conference.

The portion of the program devoted to "patient consultation: doctor and pastor" will deal with the physician's understanding of the minister's role with the sick and in-hospital cooperation between the two professions. It will also discuss the advisability of revealing medical information to the family minister.

Second portion of the program will cover the subject of "use and abuse of drugs." The planning committee felt that this is a pressing problem for both professions and a problem that needs candid discussion. This section of the program will be presented by Hayden Donahue, M.D., Director, Central State Hospital, Norman.

The second session will be followed by a dinner planning session where representatives from the counties can discuss their local problems and receive encouragement or advise about possible programs and problem solutions. □

## Kenyon Named To AMA Council



REX E. KENYON, M.D.

One of the most sought after appointments in the AMA has fallen to Oklahoma's Rex E. Kenyon, M.D., Past-President of the OSMA. During the mid-winter AMA Clinical Conference it was announced that he had been named to the AMA's Council on Legislative Activities.

Appointments to this 13-member council are made by the AMA Board of Trustees. The appointments are reconsidered each year and an individual may serve a maximum of ten years.

Doctor Kenyon was informed of his appointment when he arrived in Denver as an alternate delegate to the AMA from Oklahoma. Confirmation of the appointment was made only the day before by the Board of Trustees.

The Council on Legislative Activities reviews all federal legislation affecting medicine or physicians, either directly or indirectly. It recommends positions for the AMA, subject to the policies of the Board of Trustees and House of Delegates. In addition the Council has charge of all legislative contacts and lobbying efforts.

Kenyon has been an active member of the AMA's Speakers' Bureau since its inception. He represents the AMA at non-professional meetings throughout the United States. □

## DEATHS

J. C. WAGNER, M.D.

1893-1969

J. C. Wagner, M.D., 73-year-old Ponca City physician, died October 27th, 1969. A native of Kansas, Doctor Wagner graduated from the University of Oklahoma School of Medicine in 1919. His practice was established in Ponca City in 1921 where he remained until 1960. At that time he joined the staff of Western State Hospital in Ft. Supply, returning to Ponca City in 1966.

The OSMA had presented Doctor Wagner with a Life Membership in recognition of his years of service to the profession. He was affiliated with the Phi Beta Pi medical fraternity.

W. T. ANDRESKOWSKI, M.D.

1893-1969

A 76-year-old Elk City physician, W. T. Andreskowski, M.D., died at his home November 13th, 1969. A native of Buffalo, New York, Doctor Andreskowski graduated from the University of Oklahoma School of Medicine in 1919. He lived in Terrel, Oklahoma for a short while before establishing his practice in Ryan, Oklahoma where he remained until his retirement in 1951.

In 1952, the OSMA presented Doctor Andreskowski with a Life Membership.

DANIEL W. LEE, JR. M.D.

1929-1969

Funeral services were held December 9th, 1969 for Daniel W. Lee, Jr., M.D., Guthrie physician. Born July 14th, 1929 in Wewoka, Oklahoma, Doctor Lee became the first Negro to graduate from the University of Oklahoma School of Medicine in 1955.

Doctor Lee had practiced in California, Louisiana and Texas before moving to Guthrie in 1966. □





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## "Report Child Abuse" Physicians Told

In a letter to all 2,200 members of the OSMA Hillard E. Denyer, M.D., Association president, urged that physicians report known or suspected instances of child abuse to the proper authorities immediately upon discovery.

In his letter Doctor Denyer pointed out that the probable incidences of serious child abuse in the nation is more than 10,000 cases every year. Many additional thousands of cases in which the mistreatment is of less dangerous proportions go undetected.

Recently the American Medical Association Journal stated editorially that child abuse "may turn out to be a more frequent cause of deaths than such well recognized diseases as leukemia, cystic fibrosis, and muscular dystrophy, and may well rank with automobile accidents."

At the urging of the OSMA, the Oklahoma State Legislature adopted a child abuse reporting statute several years ago. The statute provides that any physician or surgeon, resident, intern, or registered nurse having reason to believe that a child has had serious injury inflicted as a result of abuse must report the matter promptly. In addition the law provides that **any person** attending a child in a hospital or similar institution must report immediately to the person in charge of the institution who shall then make a report to the authorities.

The Oklahoma law lists a number of possible agencies or officials to report to. The easiest procedure would be to report to the district attorney or assistant district attorney. However, it does specify that this information can be directed to any public child protection agency, a public welfare official, the police, or the sheriff.

Any person making such report is granted immunity from civil or criminal liability so long as the report is made in good faith. A check list for the detection of possible abuse in childhood injury was sent to all members of the association with Doctor Denyer's letter. □

## "Medicredit" Revealed To Congress Committee

AMA officials in testimony before the House Ways and Means Committee of the United States Congress have revealed information on the voluntary national health insurance plan called "Medicredit."

According to Russell B. Roth, Speaker of the AMA's House of Delegates and practicing physician in Erie, Pennsylvania, "Medicredit" would not affect the present Medicare program for those 65 and older.

It would utilize the system of federal income tax credits to those individuals and families who purchase qualified health coverage from approved private insurance companies or plans. In effect, Doctor Roth testified, a person's federal tax liability would act as an index as to what share of the cost of his health insurance premium would be borne by the federal government and how much would be paid by the individual.

For those individuals and families who, in terms of their tax liability, are in the bottom 30% of taxpayers, health insurance protection would be provided without cost to them. They would receive a certificate entitling them to free health insurance from any qualified company or plan.

Doctor Roth explained that as the individual or family's tax liability level rose, the federal government would assume a smaller proportionate share of the cost of health insurance.

Basic medical benefits of Medicredit would include:

- Up to 60 days of in-patient hospital services, including maternity services;

- All emergency room and out-patient service provided in the hospitals;

- All physician services, whether performed in the hospital, home, office or elsewhere.

In his testimony, Doctor Roth stressed the importance of utilizing private insurance carriers, thus taking maximum advantage of private sector competition to help hold down costs. □

## Carlock Named Vice- President of Southern Medical Association



J. HOYLE CARLOCK, M.D.

J. Hoyle Carlock, M.D., Ardmore, was elected First Vice-President of the Southern Medical Association at their recent annual meeting held in Atlanta, Georgia. A former president of the Oklahoma State Medical Association (1962-63), Doctor Carlock will also serve on several standing committees of SMA. He will preside over the councilors of the 18 units of the association and serve as chairman of the five-member executive committee. The council is composed of one councilor from each of the 17 member states and the District of Columbia.

A graduate of Tulane University School of Medicine, Doctor Carlock served his internship at Charity Hospital, New Orleans and received his residency training from Scott and White Hospital, Temple, Texas. He took further studies in Dublin, Ireland; Paris, France and Vienna, Austria.

Before his election as Vice-President, he had served as an Associate Councilor, Councilor and Chairman of the Council to SMA. He has been active in the Oklahoma Public Expenditures Council and the Oklahoma Medical Research Foundation. □



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The Woman's Auxiliary to the Southern Medical Association, including a score of Oklahoma medics, was welcomed to the most fabulous of all annual meetings in beautiful, historical Atlanta, Georgia, November 10th-13th, 1969.

Thanks to Mrs. Perry M. White, Jr., Atlanta Convention Chairman, and the cooperation and participation of the many convention committee ladies, with warm hospitality as the piece de resistance, Atlanta was a headline at the Regency Hyatt House for it was a red and pink affair, which spelled operation success.

The President of the Association opened the festivities with a reception on Sunday evening.

Monday morning began with a breakfast "Christmas in Atlanta," a prelude to the oncoming holiday spirit. Honor guests included Doctor Samuel Turner, Tulsa, Councilor for Southern and Doctor James E. White, Tulsa, Associate Councilor, Mrs. John M. Chenault, Decatur, Alabama, President, Woman's Auxiliary to the AMA, Mrs. R. C. L. Robertson, Houston, Texas, President-Elect, AMA Auxiliary and Mrs. Carl Welch, Little Rock, Arkansas, President, Woman's Auxiliary to the Student American Medical Association.

The gorgeous holiday luncheon on top of the Mart, on Monday, was a thing of beauty due to Mrs. Elias Margo, and Mrs. Frank Buchanan, Shawnee, Oklahoma and their beautiful red and pink decorations accented by crisp green holly from the groves of Mrs. G. Prentiss Lee, Portland, Oregon, Vice-President, Woman's Auxiliary to AMA.

A tour of Stone Mountain in which the likenesses of Jefferson Davis, Robert E. Lee ancestors of the Southern Auxiliary president and Andrew Jackson are being chisled during a 50-year period. A visit to the Cyclorama, a sad reminder of differences in Civil War days, Plantation House, Memorial Arts Center, Swann House, Underground Atlanta, famous for "Gone With The Wind," the Acadian breakfast honoring Mrs. Gordon W. Peek, Baton Rouge, Louisiana, incoming president of Southern Auxiliary, the tea at the Governor's Mansion with Governor Les-

ter Maddox as the official greeter, the Southern Association's Luncheon and Annual President's Dinner Dance all furnished dazzling thoughts for happy memories in a tourist's paradise.

Oklahoma auxiliary members participating in Tuesday's general session following the auxiliary president's T.V. broadcast honoring physicians were Mrs. Thomas Buxton, Oklahoma County Medical Auxiliary President, Mrs. J. Hartwell Dunn, Oklahoma State Auxiliary President, Mrs. Samuel Turner, Tulsa, Councilor for Southern, Mrs. Benjamin Gaston, Muskogee Doctors' Day Information Chairman, Mrs. Daniel Storts, Tulsa, Oklahoma Doctors' Day Chairman, Mrs. Joseph Kelso, parliamentarian, Mrs. Royce Hinkle and Mrs. William Best Tohmppson, pages, all of Oklahoma City.

The Doctors' Day Award Luncheon was a thriller for Oklahoma for Tulsa County Auxiliary won the coveted Feldner Trophy for the fourth time in seven years for best all around State Exhibit for Doctors' Day. We are proud, proud, proud — Congratulations Tulsa.

The luncheon was also a three cheers for the red white and blue tribute to the physicians of the South under the direction of two tremendous people, Doctor and Mrs. James H. Manning, Marietta, Georgia as chairmen who created a heart thrilling extravaganza with the glorious music of the famous Marietta Choral Guild under the direction of Mrs. Jeanette Sheeler. All hearts skipped a beat—for we were so honored to be Americans as we were musically reminded that "This Is Our Country." Long may our country, auxiliary and medicine survive with dignity.

The writer became the 46th past-president of Southern Auxiliary of which three other Oklahoma City ladies claim the honor of past-president: Mrs. Kelly West, Mrs. Joseph Kelso and Mrs. Elias Margo.

Yours,  
ZELLIE



**Average Americans spend approximately \$247 annually for personal health care.** According to the Bureau of Research and Planning at the California Medical Association, this 1968 total represents an increase of 12 percent over the prior year and 26 percent since 1966. During 1968 the average American spent an estimated \$57.50 for physician services compared with \$52.00 in 1967 and \$47.00 in 1966. The most costly component of health care, as well as the one showing the fastest rate of increase, was hospital care; in 1968 per capita in expenditures amounted to \$104.50, a two-year increase of 33 percent. In total, expenditures for personal health care accounted for 7.2 percent of per capita personal income in 1968.

**Back in 1920 a telephone call from New York to San Francisco cost \$20.** At the time you could mail 1,037 letters for \$20. In 1968 the phone calls cost \$2.85, but \$2.85 will pay the postage on only 47 letters . . . and to top it off, the government is investigating the telephone system.

**Interesting outgrowth of the clamor for national health insurance** seems to be the sudden creation of a mystery organization known as the American Patients Association. Although there may be no connection, the organization was incorporated in 1968 but no one heard anything from it until labor leader Walter Reuther announced his plan. All of a sudden the association seems to have a lot of money but no one can find out if it has any members. Its publication says that it "represents the patient-consumer in the development of national health policy."

**Auto insurance rates are soaring . . . not because of medical costs . . . but because of repair costs** according to Arthur C. Mertz, General Counsel for the National Association

of Independent Insurers. He recently told a U. S. Senate Committee that the cost of replacement parts used in auto repair are increasing three and one-half times the rate of new car prices. For example, a 1969 Chevrolet Impala lists at \$3,500, but it would cost \$7,500 to buy all the individual parts and another \$7,500 to assemble them.

**Doctor draft will be suspended for the next two years** if government projections are correct. Pentagon planners have concluded that there will be no need for the draft in 1970 or 1971. Reason is that the Berry plan, under which medical students are allowed to finish residency training in return for a promise to serve on active duty after graduation, has been attracting all the recruits the services need. Letters have gone out to hospitals urging them to accept young M.D.'s for residency training, indicating little likelihood of their call up. The situation is not likely to be permanent, however. After a year or two of no doctor, draft, enrollments in the Berry plan are expected to drop off, which would necessitate a new draft call. No decision yet on how the new draft lottery will affect students headed for medical careers.

**Military medical school**, thought by some to be the answer to the military's need for doctors, is apparently not in the offing. Representative F. Edward Herbert (D-La.) has given up the idea of holding hearings this year on his bill to establish such a school. He has decided that the current climate of controversy involving the so-called military-industrial complex is not the proper setting for hearings on a new military school, medical or not. Herbert has strong personal feelings about the establishment of a military medical academy and may be expected to give the proposal a strong push next year. There are indications that the representative may have significant aid on the Senate side of Capitol Hill. Senator Ralph Yarborough (D-Tex.), Chairman of the Labor Committee has indicated that he will back the plan. □



## BOOK REVIEWS

**CURRENT RESEARCH ON GROUP A STREPTOCOCCUS.** Edited by Rene Caravano, Maitre de Recherches, Institut National de la Sante et de la Recherche Medicale, Paris, France. 365 pp., illustrated. Excerpta Medica Foundation, 1968. \$25.00.

This represents the proceedings of a symposium held at the International Children's Centre, Paris, France, July 16th-19th, 1966. The Symposium was chaired by Doctor Maclin McCarty of the Rockefeller University in New York. The participants included a large number of workers prominent in streptococcal research throughout the world.

This monograph treats three focal points of research primarily. The composition of the group A streptococcus cell and the action of its components or extracellular products is thoroughly documented. The second point deals with immunity against

the group A streptococcus. The possibility of extracting an immunizing type-specific fraction practically utilizable in humans as a vaccine appears a possibility. The third point deals with the L forms of group A streptococcus and probably represents the first extensive review of this relatively new field of research.

This is a valuable reference for those interested in group A streptococci and the diseases with which it is associated. Otherwise this monograph will be of little interest to physicians.—*Harris D. Riley, Jr., M.D.*

**MEDICAL INTERVIEWING: A PROGRAMMED MANUAL.** By Robert E. Froelich, M.D., Associate Professor of Psychiatry, University of Missouri, and F. Marian Bishop, Ph.D., M.S.P.H., Associate Professor, Community Health and Medical Practice, University of Missouri. St. Louis, The C. V. Mosby

Company, January, 1969. 116 pp. In soft cover. \$4.75.

Divided into three major units relating the types of responses, techniques for interviewing, and suggested outlines for recording information, the manual seems directed primarily at the student level. Situations are suggested and the reader is asked to pin his response to the problem at hand and then compare that response to those of the authors.

Hints as to opening, structuring and closing the interview are all placed within the context of the simulated interviews and several basic physician responses are pictorially represented. The manual represents a plea for a more open-ended interview but to the busy practitioner, who must accomplish physical examination and other procedures during a limited period with the individual patient, this is not often very practical.—*Ben C. Pendarvis, M.D.* □

## Miscellaneous Advertisements

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